

O'Bryen, Barbara

From: Seharaseyon, Jegatheesan
Sent: Friday, August 30, 2002 11:15 AM
To: O'Bryen, Barbara
Subject: RE: 09/981289

Importance: High

Hi,
Please search SEQ ID NO: 20 of 09/981, 289. Thanks
J.Seharaseyon
Art Unit 1647
CM1 10D16
10B19 MB
Phone:(703)-305-1112
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Point of Contact:
Barb O'Bryen
Technical Information Specialist
STIC CM1 6A05 308-4291

BoB
9-3-02

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GenCore version 4.5
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OM protein - protein search, using sw model

Run on: August 30, 2002, 17:23:47 ; Search time 30.33 Seconds
(Without alignments)
574.962 Million cell updates/sec

Title: US-09-981-289A-20

Perfect score: 804
Sequence: 1 VRSSRTSPDKPVAHVANP.....RDYLDFAESGVYEGIAL 157

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 747574 seqs, 111073796 residues

Total number of hits satisfying chosen parameters: 747574

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%

Listing first 45 summaries

Database : A.GeneSeq.032802:*

- 1: /SIDSL/gcgdata/hold-geneseq/genesqp-emb1/AA1980.DAT:*
- 2: /SIDSL/gcgdata/hold-geneseq/genesqp-emb1/AA1981.DAT:*
- 3: /SIDSL/gcgdata/hold-geneseq/genesqp-emb1/AA1982.DAT:*
- 4: /SIDSL/gcgdata/hold-geneseq/genesqp-emb1/AA1983.DAT:*
- 5: /SIDSL/gcgdata/hold-geneseq/genesqp-emb1/AA1984.DAT:*
- 6: /SIDSL/gcgdata/hold-geneseq/genesqp-emb1/AA1985.DAT:*
- 7: /SIDSL/gcgdata/hold-geneseq/genesqp-emb1/AA1986.DAT:*
- 8: /SIDSL/gcgdata/hold-geneseq/genesqp-emb1/AA1987.DAT:*
- 9: /SIDSL/gcgdata/hold-geneseq/genesqp-emb1/AA1988.DAT:*
- 10: /SIDSL/gcgdata/hold-geneseq/genesqp-emb1/AA1989.DAT:*
- 11: /SIDSL/gcgdata/hold-geneseq/genesqp-emb1/AA1990.DAT:*
- 12: /SIDSL/gcgdata/hold-geneseq/genesqp-emb1/AA1991.DAT:*
- 13: /SIDSL/gcgdata/hold-geneseq/genesqp-emb1/AA1992.DAT:*
- 14: /SIDSL/gcgdata/hold-geneseq/genesqp-emb1/AA1993.DAT:*
- 15: /SIDSL/gcgdata/hold-geneseq/genesqp-emb1/AA1994.DAT:*
- 16: /SIDSL/gcgdata/hold-geneseq/genesqp-emb1/AA1995.DAT:*
- 17: /SIDSL/gcgdata/hold-geneseq/genesqp-emb1/AA1996.DAT:*
- 18: /SIDSL/gcgdata/hold-geneseq/genesqp-emb1/AA1997.DAT:*
- 19: /SIDSL/gcgdata/hold-geneseq/genesqp-emb1/AA1998.DAT:*
- 20: /SIDSL/gcgdata/hold-geneseq/genesqp-emb1/AA1999.DAT:*
- 21: /SIDSL/gcgdata/hold-geneseq/genesqp-emb1/AA2000.DAT:*
- 22: /SIDSL/gcgdata/hold-geneseq/genesqp-emb1/AA2001.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	802	99.8	157	7 AAP60524	Sequence of tumour
2	802	99.8	157	8 AAP70095	Tumour necrosis fa
3	802	99.8	157	8 AAP70144	Amino acid sequenc
4	802	99.8	157	12 AAR14112	Neutrophil stimula
5	802	99.8	157	12 AAR14270	Human TNF. Homo s
6	802	99.8	157	13 AAR27747	Human tumour necro
7	802	99.8	157	14 AAR38069	Human TNF-alpha.
8	802	99.8	157	14 AAR42679	Human Tumour Necro
9	802	99.8	157	15 AAR57437	Human tumour necro
10	802	99.8	157	15 AAR60243	Human TNF-alpha.
11	802	99.8	157	15 AAR62463	Tumour necrosis fa

12	802	99.8	157	18 AAW28530	Human TNF. Homo s
13	802	99.8	157	19 AAW40819	Human tumour necro
14	802	99.8	157	20 AAY23242	Human tumour necro
15	802	99.8	157	22 AAG79124	Amino acid sequenc
16	802	99.8	157	22 AAE10848	Human tumour necro
17	802	99.8	157	22 AAC67761	Amino acid sequenc
18	802	99.8	157	22 AAB74783	Wild type human tu
19	802	99.8	158	7 AAP60532	Sequence encoded b
20	802	99.8	158	7 AAP60525	Sequence of tumour
21	802	99.8	158	7 AAP60533	Sequence encoded b
22	802	99.8	158	8 AAP70635	Sequence of tumour
23	802	99.8	158	9 AAP81069	Sequence of new ph
24	802	99.8	158	10 AAP91026	Human tumour necro
25	802	99.8	158	10 AAP93188	Synthetic tumour n
26	802	99.8	158	10 AAP95650	Antitumour peptide
27	802	99.8	158	10 AAP94762	Polypeptide derive
28	802	99.8	158	11 AAR04115	Modified human tum
29	802	99.8	158	11 AAR05613	Antitumour peptide
30	802	99.8	158	11 AAR05807	Polypeptide with a
31	802	99.8	158	11 AAR07901	Human TNF gene pro
32	802	99.8	158	13 AAR20625	Synthetic hTNF. S
33	802	99.8	158	17 AAR8591	Human methionyl-TN
34	802	99.8	158	17 AAR88592	Human methionyl-TN
35	802	99.8	158	22 AAY72933	Human mature tumou
36	802	99.8	159	8 AAP71174	Sequence of human
37	802	99.8	160	9 AAP80161	Biosynthetic multi
38	802	99.8	164	22 AAB82901	Histidine-tagged t
39	802	99.8	180	22 AAY72934	Ompa signal peptid
40	802	99.8	193	19 AAW48246	Tumour necrosis fa
41	802	99.8	193	20 AAW90067	Human TNF-alpha co
42	802	99.8	233	6 AAP50096	Sequence of human
43	802	99.8	233	7 AAP60555	Sequence of mature
44	802	99.8	233	7 AAP60531	Sequence of tumour
45	802	99.8	233	7 AAP60605	Sequence of tumour

ALIGNMENTS

RESULT 1	
AAP60524	AAAP60524 standard; Protein: 157 AA.
XX	
AC	AAAP60524:
XX	
DT	07-AUG-1991 (first entry)
XX	
DE	Sequence of tumour necrosis factor (TNF).
XX	
KW	Anticancer agent; antitumour; antimalarial; tumour necrosis factor.
XX	
PN	MO8603751-A.
XX	
PD	03-JUL-1986.
XX	
PE	19-DEC-1985; 85MO-EP00721.
XX	
PR	09-OCT-1985; 85US-0785847.
XX	
PR	21-DEC-1984; 84US-0684595.
XX	
PR	09-OCT-1986; 86MO-US02133.
XX	
PA	(BIOJ) BIOGEN NV.
PA	(FIER/) FIERIS W C.
PA	(ALLET/) ALLET B.
PA	(BIOG-) BIOGEN INC.
XX	
PI	Fiers WC, Fransen LM, Tavernier JHL, Marmenout ALM;
XX	VanderHeyden J, Allet B, Washima EH;
XX	WPI: 1986-182891/28.
DR	N-PSDB: AAN60442.
XX	
PT	Mammalian tumour necrosis factors - produced by culturing

PT pro-karyotic hosts transformed with recombinant DNA
 XX
 PS Claim 11: Page 66; 93pp; English.
 XX
 CC TNF-like polypeptides and compsns. are produced by the fermentation
 CC of host cells transformed with at least one DNA sequence which codes
 CC for a mammalian TNF-like polypeptide operatively linked to an
 CC expression control sequence in the transformed host.
 XX
 SQ Sequence 157 AA:

Query Match 99.8%; Score 802; DB 7; Length 157;
 Best Local Similarity 99.4%; Pred. No. 2.2e-75;
 Matches 156; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 1 VRSSSRTPSDKPYAAHVANPOABGOLWMLNRRANALLANGVELRDQLVVPSSEGLYIYS 60
 DB 1 vrsssrtpsdckpyahvanpaeqqlqwlrranallangvelrdnqlvvpsqglyiys 60
 OY 61 QVLFKGGCPESTHVLTHRTISRAVSQTKVNLISAISKPCQRETPGAEAKPMXEPITL 120
 DB 61 qvlfkggcpesthvllthrtisravsyqtkvnlisaiskpcqretpgeaakpmxepiy1 120
 OY 121 GGVFQLEKGRLSAEINRPDYLDFAESGOVYFGIIL 157
 DB 121 ggvflekgrlisaeinrpyldfaesgvyfgilal 157

RESULT 2
 AAP70095
 ID AAP70095 standard; protein; 157 AA.
 AC AAP70095;
 XX
 DT 04-APR-1991 (first entry)
 XX
 DE Tumour necrosis factor.
 XX
 KM Plasmid; tumour necrosis factor; antitumour agent.
 XX
 OS Escherichia coli.
 XX
 PN EP220482-A.
 PD 06-MAY-1987.
 PF 19-SEP-1986; 86EP-0112941.
 PR 30-SEP-1985; 85JP-0217740.
 XX
 PA (SUNR) SUNTORY LTD.
 PI Oshima T, Tanaka S, Matsukura S;
 DR WPI; 1987-124161/18.
 XX
 PT New plasmid for efficient tumour necrosis factor prodn. -
 PT comprises plasmid with DNA fragment having phage gene derived
 PT promoter region and E coli derived transcription termination
 PT sequence
 XX
 PS Claim 6; page 17-18; 31pp; English.
 XX
 CC Tumour necrosis factor can be expressed using a plasmid comprising
 CC a phage gene-derived promoter region upstream of the TNF structural gene
 CC and an E.coli trp a gene terminator joined immediately downstream of a
 CC base sequence encoding the termination of translation of the structural
 CC gene. The plasmid is capable of efficient expression of TNF on a large
 CC scale and with high purity. The transformants may achieve a TNF activity
 CC 40-300 times as great as with prior transformants. TNF may comprise at
 CC least 40% of total cell protein. The plasmid lacks a pBR322 derived
 CC repressor of primer gene. TNF is an antitumour agent.

XX
 SQ Sequence 157 AA:

Query Match 99.8%; Score 802; DB 8; Length 157;
 Best Local Similarity 99.4%; Pred. No. 2.2e-75;
 Matches 156; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 1 VRSSSRTPSDKPYAAHVANPOABGOLWMLNRRANALLANGVELRDQLVVPSSEGLYIYS 60
 DB 1 vrsssrtpsdckpyahvanpaeqqlqwlrranallangvelrdnqlvvpsqglyiys 60
 OY 61 QVLFKGGCPESTHVLTHRTISRAVSQTKVNLISAISKPCQRETPGAEAKPMXEPITL 120
 DB 61 qvlfkggcpesthvllthrtisravsyqtkvnlisaiskpcqretpgeaakpmxepiy1 120
 OY 121 GGVFQLEKGRLSAEINRPDYLDFAESGOVYFGIIL 157
 DB 121 ggvflekgrlisaeinrpyldfaesgvyfgilal 157

RESULT 3
 AAP70144
 ID AAP70144 standard; protein; 157 AA.
 AC AAP70144;
 XX
 DT 13-MAY-1991 (first entry)
 XX
 DE Amino acid sequence of mature tumour necrosis factor (TNF).
 XX
 KM Tumour necrosis factor analogue; lymphokine; anti-tumour.
 XX
 PN EP220966-A.
 PD 06-MAY-1987.
 PF 30-OCT-1986; 86EP-0308484.
 PR 22-MAY-1986; 86US-0866213.
 PR 30-OCT-1985; 85US-0792815.
 XX
 PA (CETU) CETUS CORP.
 PI Ian LSL, Dorin G, Yamamoto R, Hanisch WH, Thomson JW;
 PI Wolfe SN.
 DR WPI; 1987-124486/18.
 XX
 PT Purified recombinant tumour necrosis factor compsn. - obt'd. by
 PT using a hydrophobic matrix to retain the factor followed by
 PT chromatographic elution
 XX
 PS Disclosure; Fig 3; 25pp; English.
 XX
 CC Specific examples of TNF analogues include N-terminally deleted
 CC species of the protein, including those having deletions of the
 CC N-terminal 1,2,3,4,5,6,7,8,9,10,14, and 31 AA's of the SQ in AAP70144.
 CC Mutelins lacking up to and including the first ten AA's at the
 CC N-terminus have been found to have comparable or greater specific
 CC activities as compared to the TNF of the SQ shown in AAP70144. Other
 CC mutelins of TNF covered by the method of the invention include
 CC species of TNF in which any or all of the cysteine residues have
 CC been converted to serine or other neutral AA's for example, glycine
 CC or alanine. In general, neutral AA replacements of the cysteine at
 CC position 69 result in active TNF proteins. It appears that the
 CC cysteine at position 101 is also dispensable.
 XX
 SQ Sequence 157 AA:

Query Match 99.8%; Score 802; DB 8; Length 157;
 Best Local Similarity 99.4%; Pred. No. 2.2e-75;

Matches 156; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 1 VRSSRTPSDKPAHVAVNPAEGQLWLNRRANALLANGVELRDNLVPSGLYLIS 60
 DB 1 VRSSRTPSDKPAHVAVNPAEGQLWLNRRANALLANGVELRDNLVPSGLYLIS 60
 OY 61 QVLEKGGCPESTHVLHTTISRIVSYOTKYNLSAISKPCQRETPEGAEAKPMXEPYIL 120
 DB 61 QVLEKGGCPESTHVLHTTISRIVSYOTKYNLSAISKPCQRETPEGAEAKPMXEPYIL 120
 OY 121 GGVFQLEKGRDLAEINRPDYLDFAESGQVYFGITALL 157
 DB 121 GGVFQLEKGRDLAEINRPDYLDFAESGQVYFGITALL 157

RESULT 4
 AAR14112 standard; peptide: 157 AA.
 AC AAR14112;
 DX 11-DEC-1991 (first entry)
 DE Neutrophil stimulating peptide.
 XX hTNF; AIDS; cancer; inflammatory syndromes; rheumatoid arthritis;
 KM adult respiratory distress syndrome; human tumour necrosis factor.
 XX synthetic.
 OS
 XX

Key Location/Qualifiers
 FH 111..120
 FT /label= peptide 275
 FT 1..18
 FT /label= peptide 301
 FT 43..58
 FT /label= peptide 302
 FT 94..109
 FT /label= peptide 303
 FT 63..83
 FT /label= peptide 304
 FT /note= "neutrophil stimulating activity"
 FT 132..150
 FT /label= peptide 305
 FT 13..26
 FT /label= peptide 306
 FT 22..40
 FT /label= peptide 307
 FT 54..68
 FT /label= peptide 308
 FT /note= "neutrophil stimulating activity and
 selective effects on neutrophil
 degranulation"
 FT 73..94
 FT /label= peptide 309
 FT /note= "neutrophil stimulating activity"
 FT 79..89
 FT /label= peptide 323
 FT 76..84
 FT /label= peptide 393
 FT 81..94
 FT /label= peptide 394
 FT 70..80
 FT /label= peptide 395
 FT /note= "neutrophil stimulating activity"
 FT 84..94
 FT /label= peptide 396
 XX
 PN W09113908-A.
 XX
 XX 19-SEP-1991.
 PD
 XX 12-MAR-1991; 91WO-AU00086.

XX 12-MAR-1990; 90AU-0009065.
 PR
 XX (PEPT-) PEPTIDE TECHN LTD.
 PA
 XX Rathjen DA, Ferrante A;
 PI
 XX WPI; 1991-295580/40.
 DR
 XX New neutrophil stimulating peptide(s) derived from human TNF -
 FT useful for treating depressed neutrophil function in e.g. AIDS
 FT and cancer, and inflammatory syndrome in e.g. rheumatoid
 PT arthritis
 PS
 XX Disclosure; Fig 1; 27pp; English.
 CC The amino acid sequence codes for human tumour necrosis factor.
 CC Peptides derived from this sequence have neutrophil stimulating
 CC activity. The peptides were synthesised using the Fmoc-polymide
 CC method of solid peptide synthesis. Treatment with the peptides
 CC can be used to restore depressed or aberrant neutrophil activity
 CC without causing the side effects associated with the therapeutic
 CC use of the whole TNF molecule. Such peptides can be used in the
 CC treatment of individuals suffering from AIDS, cancer or
 CC inflammatory syndromes e.g. rheumatoid arthritis or adult
 CC respiratory distress syndrome.
 XX
 SQ Sequence 157 AA:

Query Match 99.8%; Score 802; DB 12; Length 157;
 Best Local Similarity 99.4%; Pred. No. 2.2e-75;
 Matches 156; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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 DB 1 VRSSRTPSDKPAHVAVNPAEGQLWLNRRANALLANGVELRDNLVPSGLYLIS 60
 OY 61 QVLEKGGCPESTHVLHTTISRIVSYOTKYNLSAISKPCQRETPEGAEAKPMXEPYIL 120
 DB 61 QVLEKGGCPESTHVLHTTISRIVSYOTKYNLSAISKPCQRETPEGAEAKPMXEPYIL 120
 OY 121 GGVFQLEKGRDLAEINRPDYLDFAESGQVYFGITALL 157
 DB 121 GGVFQLEKGRDLAEINRPDYLDFAESGQVYFGITALL 157

RESULT 5
 AAR14270
 ID AAR14270 standard; peptide: 157 AA.
 AC AAR14270;
 DX 09-JAN-1992 (first entry)
 DE Human TNF.
 XX
 XX Tumour necrosis factor; cytotoxic; metastasis.
 KW
 XX Homo sapiens.
 OS
 XX

Key Location/Qualifiers
 FH 111..120
 FT /label= #275
 FT 1..18
 FT /label= #301
 FT 43..58
 FT /label= #302
 FT /note= "claim 2"
 FT 94..109
 FT /label= #303
 FT 63..83
 FT /label= #304

FT	Peptide	132..150
FT	/label= #305	
FT	/note=" claim 4 "	
FT	Peptide	13...26
FT	/label= #306	
FT	Peptide	22...40
FT	/label= #307	
FT	Peptide	54...68
FT	/label= #308	
FT	/note=" claim 3 "	
FT	Peptide	73...94
FT	/label= #309	
FT	/note=" claim 5 "	
FT	Peptide	79...89
FT	/label= #323	
FT	Peptide	81...94
FT	/note=" claim 6 "	
FT	Peptide	70...80
FT	/note=" claim 7 "	
XX	WO9114702-A.	
XX		
PD	03-OCT-1991.	
XX		
PE	15-MAR-1991;	91WO-AU00100.
XX		
PR	22-NOV-1990;	90AU-0003477.
PR	19-MAR-1990;	90AU-0009156.
PA	(PEPT-) PEPTIDE TECHN LTD.	
PI	Rachjen D, Aston R;	
DR	WPI; 1991-310534/42.	
XX		
PT	New cytotoxic and/or proliferation-inhibiting polypeptide fragments - useful in treatment of tumours with reduced side effects.	
XX		
PS	Claim 1; Fig 1; 35pp; English.	
CC	The peptide fragments indicated in the feature table have cytotoxic and/or inhibition of proliferation effects on tumour cells. The peptides may be co-administered with whole TNF alpha or with a cyto-toxic drug.	
CC		
XX	Sequence 157 AA;	
SQ		
Query Match 99.8%; Score 802; DB 12; Length 157;		
Best Local Similarity 99.4%; Pred. No. 2.2e-75;		
Matches 156; Conservative 0; Mismatches 1; Indels 0; Gaps 0.		
OY	1 VRSSRTPSDKVAHVAVNPQAEGQLQWLNRFRANALLANGVELRDNLQVLVPSEGLYLIS	60
DB	1 VRSSTPSPDKPVAVHVNPNPQAEGLQWLNRFRANALLANGVELRDNLQVLVPSEGLYLIS	60
OY	61 QVLEFGGCGPSTHVLLTHTISRIVASYGTKNVLSAISKSCOPRETPEGAEAKPWKEPIYL	120
DB	61 QVLFYGSGCPSTHVLLTHTISRIVASYGTKNVLSAISKPCQRETPEGAEAKPWKEPIYL	120
OY	121 GGVOLEKGDRLSAETINRPDYLDPAESGGVYFGIALL	157
DB	121 ggvtglekgdrtsaetlnrpdylidfaesggvyfgiail	157
RESULT	6	
ID	AAR27747	
XX	AAR27747 standard; protein; 157 AA.	
AC	AAR27747;	
DT	03-MAR-1993 (first entry)	

Accession	Species	Protein	Region	Location/Qualifiers
DE	Human	tumour necrosis factor alpha.		
XX				
KW	hTNF:	monoclonal antibody; sepsis syndrome, cachexia, microbial infection; rheumatoid arthritis; inflammation.		
XX				
OS	Homo sapiens.			
XX				
EH	Key			Location/Qualifiers
FT	Region			1..20
FT	Region			/note= "putative receptor binding portion"
FT	Region			11..13
FT	Region			/note= "putative receptor binding portion"
FT	Region			37..42
FT	Region			/note= "putative receptor binding portion"
FT	Region			49..57
FT	Region			/note= "putative receptor binding portion"
FT	Region			155..157
FT	Region			/note= "putative receptor binding portion"
FT	Region			59..80
FT	Region			/note= "epitope for Ab binding"
FT	Region			87..108
FT	Region			/note= "epitope for Ab binding"
XX				
PN	WO9216553-A.			
XX				
PD	01-OCT-1992.			
XX				
PF	18-MAR-1992; 92MO-US02190.			
XX				
PR	18-MAR-1991; 91US-0670827.			
PA	(CENZ) CENTOCOR INC.			
PI	Daddona PE, Ghraieb J, Knight DM, Le J, Siegel SA;			
PI	Vilcek J;			
XX				
DR	WPI: 1992-349155/42.			
XX				
PT	Monoclonal and chimeric antibodies to human TNF - useful for			
PT	treating sepsis syndrome, cachexia, microbial infections,			
PT	rheumatoid arthritis, inflammation, etc.			
XX				
PS	Claim 22; Page 77; 105pp; English.			
XX				
CC	Anti-TNF antibodies were prep'd. which bound to an epitope of at			
CC	least 5 amino acids of residues 87-108 or both of residues 59-80 and			
CC	87-108 of human tumour necrosis factor alpha, but do not bind known			
CC	or putative receptor binding portions of TNF, such as those shown in			
CC	the features table. The antibodies may be prep'd. by hybridomas or			
CC	recombinantly and may be used for in vivo treatment and diagnosis of			
CC	human pathologies associated with TNF e.g. sepsis syndrome, cachexia,			
CC	circulatory collapse and shock resulting from acute or chronic			
CC	bacterial infection, acute and parasitic or infectious processes,			
CC	including bacterial, viral and fungal infections, acute and chronic			
CC	immune and autoimmune pathologies such as sarcoidosis and Crohn's			
CC	disease, vascular inflammatory pathologies such as disseminated			
CC	intravascular coagulation, graft vs. host disease, Kawasaki's disease			
CC	and malignant tumours. The antibodies may be used in combination with			
CC	TNF therapy, e.g. cancer therapy to remove the undesired side effects.			
CC	They may also be used to remove TNF from fluids, tissues or cells, to			
CC	detect or quantitate TNF and for blocking TNF activity in vivo, in			
CC	situ and in vitro.			
XX				
SQ	Sequence 157 AA;			

Query Match 99.8%; Score 802; DB 13; Length 157;

Best Local Similarity 99.4%; Pred. No. 2, 2e-75;

Matches 156; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

1 VRSSRTSDKRVAVHVNPAQEGQLWIRRNALLANGVELRDNLVDSGLYLIYS 60

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Db      1  vrsssrtpsdkpyahvvanpqaegqlqwlrranallangvelrdnqlvvpseglyllys 60
QY      61  QVLFKGGGCPSTHVLLTHRTSRIAVSYQTKVNNLSAIKSPCORETEPGAAKPKWXPETYL 120
Db      61  qvlfkqggcpsthvllthrtslriavsyqtkvnnlsaiskspcoretepgaaekpwypelyl 120
QY      121  GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db      121  ggvfqlkekgrlisaelnrpdyldfaesgvyfghiial 157

RESULT  7
AAR38069
ID      AAR38069 standard; protein; 157 AA.
XX
AC      AAR38069;
XX
DT      14-OCT-1993 (first entry)
XX
DE      Human TNF-alpha.
XX
KW      Withdrawal symptom; tumour necrosis factor; narcotic; nicotine;
        morphine; thymosin; alcohol.
XX
OS      Homo sapiens.
XX
PN      JP05117161-A.
XX
PD      14-MAY-1993.
XX
PF      23-OCT-1991; 91JP-0337489.
XX
PR      23-OCT-1991; 91JP-0337489.
XX
PA      (MIZU/) MIZUNO D.
XX
PS      (SOMA/) SOMA G.
XX
DR      WPI; 1993-191442/24.
XX
PT      Drugs for treating alcohol, morphine narcotics or nicotine
        withdrawal symptoms - contg. tumour necrosis factor-alpha,
        thymosin tumour necrosis factor fused cpd. or murine tumour
        necrosis factor-alpha prepd. from macrophage of human or animal
XX
PS      Disclosure; Page 2-3; 5pp; Japanese.
XX
CC      Drugs acting on withdrawal symptoms contain TNF, esp. TNF-alpha
        (AAR38069 and AAR38077), rTNF-S-AM1 (AAR38070), rTNF-S-AM2 (AAR38071),
        CC thymosin-beta4-TNF fused cpd. (AAR38072-76).
        CC The drugs are effective in treatment of withdrawal symptoms caused
        CC by habitual use of alcohol, morphine narcotics or nicotine in humans
        CC or animals (e.g. swine, dog, cat, chicken). The drugs may be
        CC administered as TNF at a dose of 10ng-10mg orally or 5ng-1mg i.v.
        CC or 50ng-50mg percutaneously a day for a human adult. In animals,
        CC the drugs may be administered according to the human dosage (1/60
        CC per kg body wt.).
XX
SQ      Sequence 157 AA:

Query Match          99.8%; Score 802; DB 14; Length 157;
Best Local Similarity 99.4%; Pred. No. 2.2e-75;
Matches 156; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Db      121  ggvfqlkekgrlisaelnrpdyldfaesgvyfghiial 157
QY      121  GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db      121  ggvfqlkekgrlisaelnrpdyldfaesgvyfghiial 157

RESULT  8
AAR42679
ID      AAR42679 standard; Protein; 157 AA.
XX
AC      AAR42679;
XX
DT      19-APR-1994 (first entry)
XX
DE      Human Tumour Necrosis Factor alpha.
XX
KW      Plasmid pDS56/RBSII, Sphi-TNF-alpha; mutetin; inflammation; obesity;
        septic shock; treatment; mutagenic PCR; cytokine.
XX
OS      Homo sapiens.
XX
PN      EP563714-A.
XX
PD      06-OCT-1993.
XX
PF      20-MAR-1993; 93EP-0104591.
XX
PR      02-APR-1992; 92EP-0810249.
XX
PA      (HOFF ) HOFFMANN LA ROCHE & CO AG F.
XX
PI      Lesslauer W, Lotscher H, Stuber D, Loetscher H;
        PI Stueber D;
XX
DR      WPI; 1993-313109/40.
XX
DR      N-PSDB; AAQ49223.
XX
PT      New human Tumour Necrosis Factor mutetin(s) - have amino acid
        PT change at position 86, for selective binding affinity to the
        PT p55-TNF-Receptor
XX
PS      Disclosure; Fig 1b; 29pp; English.
XX
CC      The human TNF-alpha expression plasmid pDS56/RBSII, Sphi-TNF-alpha
        CC was used as the source of TNF-alpha gene for preparing the various
        CC TNF-alpha mutants of the invention. Mutagenic PCR was used on the
        CC wild-type template to introduce amino acid substitutions at sites
        CC affecting binding specificity. The mutants retain binding activity
        CC to the human p55-TNF-Receptor but do not bind to the human p75-TNF-
        CC Receptor. Consequently, the mutants have lower systemic
        CC toxicity and only elicit some of the activities of wild-type TNF-a.
XX
SQ      Sequence 157 AA:

Query Match          99.8%; Score 802; DB 14; Length 157;
Best Local Similarity 99.4%; Pred. No. 2.2e-75;
Matches 156; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```

XX	AA57437;	
AC	13-MAR-1995	(first entry)
XX	Human tumour necrosis factor (wild-type).	
DE	Tumour necrosis factor; TNF; mltetn; variant; antitumour;	
XX	toxicity; hemorrhagic necrosis; antiviral; parasite; malaria.	
XX	Homo sapiens.	
OS		
XX	Key	Location/Qualifiers
FM	Misc-difference 1..7	/note- "one or more of the first 7 N-terminal amino acids may be deleted"
FT	Misc-difference 4	/note- "Ser pref. replaced by Arg"
FT	Misc-difference 5	/note- "Ser pref. replaced by Arg"
FT	Misc-difference 6	/note- "Arg pref. replaced by Ala"
FT	Misc-difference 7	/note- "Thr pref. replaced by His or Lys"
FT	Misc-difference 8	/note- "Pro pref. replaced by Arg"
FT	Misc-difference 9	/note- "Ser pref. replaced by Lys"
FT	Misc-difference 10	/note- "Asp pref. replaced by Arg"
FT	Misc-difference 38	/note- "Ala pref. replaced by Asp"
FT	Misc-difference 39	/note- "Asn pref. replaced by Asp, Lys or Val"
FT	Misc-difference 40	/note- "Gly pref. replaced by Asp, Lys or Val"
FT	Misc-difference 41	/note- "Val pref. replaced by Ser"
FT	Misc-difference 52	/note- "Ser pref. replaced by Ile, Glu or Lys"
FT	Misc-difference 53	/note- "Glu pref. replaced by Lys or Leu"
FT	Misc-difference 54	/note- "Gly pref. replaced by Asp or Val"
FT	Misc-difference 56	/note- "Tyr pref. replaced by Phe or Glu"
FT	Misc-difference 85	/note- "Val pref. replaced by Glu or Arg"
FT	Misc-difference 86	/note- "Ser pref. replaced by Leu, Lys, Glu or Asp"
FT	Misc-difference 87	/note- "Tyr pref. replaced by Glu or Arg"
FT	Misc-difference 88	/note- "Gln pref. replaced by Glu"
FT	Misc-difference 127	/note- "Glu pref. replaced by Ala, Val or Lys"
FT	Misc-difference 128	/note- "Lys pref. replaced by Ala, Val or Glu"
FT	Misc-difference 129	/note- "Gly pref. replaced by Glu, Lys or Val"
FT	Misc-difference 156	/note- "Ala pref. replaced by Asp"
FT	Misc-difference 157	/note- "Leu pref. replaced by Phe"
XX	DE4404124-A.	
PN	11-AUG-1994.	
PD	09-FEB-1994.	94DE-4404124.
XX	09-FEB-1993.	93KR-0001751.
XX		

PA	(HANI1)	HANIL SYNTHETIC FIBER CO LTD.
PI	Kang S, Lee I, Shin H-C, Shin N-K;	
DR	WPI, 1994-250457/31.	
DR	N-PSDB; AAO67089.	
PT	New tumour necrosis factor mutetins and related DNA - also vectors	
PT	and transformed cells, with increased antitumour activity and	
PT	lower toxicity than wild type protein	
PS	Claim 1; Page 20; 23pp; German.	
XX		
CC	TNF mutetins are claimed, in which at least one amino acid at	
CC	positions 4-10, 38-41, 52-54, 56, 85-88, 127-129, 156 or 157 is	
CC	exchanged for a different amino acid. Opt. one or more of the first	
CC	7 N-terminal amino acids is deleted. TNF causes haemorrhagic	
CC	necrosis of tumours; has anti-viral activity and inactivates some	
CC	species of malarial parasites. The mutetins have increased antitumour	
CC	activity and lower toxicity than wild-type protein.	
XX		
SO	Sequence 157 AA:	
	Query Match	99.8%; Score 802; DB 15; Length 157;
	Best Local Similarity	99.4%; Pred. No. 2.2e-75;
	Matches 156; Conservative 0; Mismatches 1; Indels 0; Gaps	0;
QY	1 VRSSRTSDRKVAHVAVNPQAEQGLWNRANALLANGVLRNQLVPSGGLTLYS	60
DB	1 VRSSRTSPDkPVAHVAVNPQAEgqLqVInrraMaLLANGVLRIdnqLVpSgGLYlLYs	60
QY	61 QVLFQGQGGPSTHVLTHTISRIAVSYQTKVNLISAIKSPCORETPEGAEAKPMXEPYVL	120
DB	61 qvlfqggqgpcshvllthhtisriavsyqtkvnlIsaIkspqcretpEGeakPMXepYvYl	120
QY	121 GGVFQLEKGDRLSAELNRPDYIDFPAESGQYVFGIAL	157
DB	121 ggvfqlkYgdrIsaElnrpdyIdfPaesgqYvfgIaL	157
	RESULT 10	
	AAR60243	
ID	AAR60243 standard; peptide; 157 AA.	
XX	AAR60243;	
AC		
XX		
DT	16-MAR-1995 (first entry)	
XX		
DE	Human TNF-alpha.	
XX		
RW	TNF-alpha; tumor necrosis factor-alpha; tlp peptide; mutetin; cancer;	
KW	sepsis; inflammation; cytokine; metastasis; lectin; adhesion;	
KW	mutagenesis.	
XX		
OS	Homo sapiens.	
XX		
Key	Location/Qualifiers	
FT	Misc-difference 1..8	
FT	/note= "in TNF mutetins, residues 1-8 are replaced	
FT	by a peptide within the region spanning	
FT	aa 5-30 of lamantin"	
FT	Misc-difference 101	
FT	/note= "in TNF mutetins, residue 101 is Ser"	
FT	Misc-difference 102	
FT	/note= "in TNF mutetins, residue 102 is Arg or	
FT	deleted"	
FT	Misc-difference 103	
FT	/note= "in TNF mutetins, residue 103 is Trp"	
FT	Misc-difference 105	
FT	/note= "in TNF mutetins, residue 105 is Pro or Ile	
FT	or residue 105 is Ile and residue 44 is Cys"	
FT	Misc-difference 106	

FT /note- "In TNF muteins, residue 106 is Ser, or
FT Misc-difference 108 residue 106 is Ser and residue 131 is Cys"
FT /note- "In TNF muteins, residue 108 is Phe"
FT Misc-difference 110 /note- "In TNF muteins, residue 110 is Lys"
FT Misc-difference 111.112 /note- "In TNF muteins, residues 111-112 are
FT /note- "In TNF muteins, residues 111-112 are
FT deleted, or residue 111 is deleted
FT or Met, or residue 109 is Gln and residue 120 is His"
FT Misc-difference 115 /note- "In TNF muteins, residue 115 is Ile or Cys"
FT Misc-difference 116 /note- "In TNF muteins, residue 116 is Lys, His or
FT /note- "In TNF muteins, residue 116 is Lys, His or
FT Val"
FT Misc-difference 115.116 /note- "In TNF muteins, residues 115-116 are
FT /note- "In TNF muteins, residues 115-116 are
FT Ile-Lys"
PN WO9418325-A.
PD 18-AUG-1994.
XX 02-FEB-1994; 94WO-EP00286.
PF 03-FEB-1993; 93EP-0400262.
PR (INNO-) INNOGENETICS NV SA.
PA De Baetselier P, Franssen L, Lucas R, Sablon E;
PI WPI; 1994-279746/34.
XX
DR New tumour necrosis factor -alpha muteins, antibodies and
PT antisense peptide(s) - used in the treatment of diseases and
PT conditions associated with the in vivo activities of TNF-A eg
PT cancer, sepsis, inflammation, etc
XX
PS Disclosure; Page 10; 132pp; English.
XX
CC TNF-alpha muteins were constructed in the tip region (given in
CC AAR602463) of human TNF-alpha. The mutations resulted in:
CC modulation of lectin-like activity; reduced toxic activity;
CC modulation of inflammatory activity; modulated adhesion molecule
CC increasing capacity; reduced metastasis promoting activity; and/or
CC increased half-life. Muteins of the mouse TNF (given in AAR60244)
CC may also be produced.
XX
XX
SQ Sequence 157 AA;
Query Match 99.8%; Score 802; DB 15; Length 157;
Best Local Similarity 99.4%; Pred. No. 2.2e-75;
Matches 156; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 VRSSSRTPSDKPVAVHVPANPOAEGLOLWLRNANLLANGVELRDNOLVVPSEGLYLYS 60
DB 1 VRSSSRTPSDKPVAVHVPANPOAEGQLQWLRNANLLANGVELRDNQLVVPSEGLYLYS 60
QY 61 QVLEFKGQGCPSPTHVLLTFTISRIAVSYQTKVNLISAIRSPQORETPEGAEAKPMXEPITL 120
DB 61 QVLEFKGQGCPSPTHVLLTFTISRIAVSYQTKVNLISAIRSPQORETPEGAEAKPMXEPITL 120
QY 121 GGVFQLEKGRDLASAINRPDYLDFAESQGVYFGITALL 157
DB 121 GGVFQLEKGRDLASAINRPDYLDFAESQGVYFGITALL 157

RESULT 11
AAR62463
ID AAR62463 standard; Protein: 157 AA.
XX

AC AAR62463;
XX 02-JUN-1995 (first entry)
DT
XX
XX Tumour necrosis factor-alpha protein.
DE Human; tumour necrosis factor; TNF; TNF-a; expression; mutein; mutation;
KW receptor; affinity; therapeutic; diagnostic; cancer therapy; cancer;
KM obesity; septic shock; meningitis.
XX Homo sapiens.
OS
XX
XX EP619372-A.
PN
XX 12-OCT-1994.
PD
XX 17-MAR-1994; 94EP-0104154.
PF
XX 29-MAR-1993; 93EP-0810224.
PR (HOFF) HOFFMANN LA ROCHE & CO AG F.
PA Banner D, Lesslauer W, Lotscher H, Stuber D, Loetscher H;
PI Stueber, D;
PI WPI; 1994-311810/39.
DR N-PSDB; AAQ73431.
DR
XX New human TNF-a muteins with higher affinity for p75-TNFR -
PT useful e.g. for cancer therapy, treatment of obesity and toxic
PT shock
PT
XX
PS Disclosure; Page 28-31; 53pp; English.
XX
CC The amino acid sequence of the human wild type tumour necrosis factor
CC alpha (TNF-a). The gene encoding the protein is placed in the expression
CC plasmid pDS56/RBSII and called pDS56/RBSII-SpH-TNFR. The expression of
CC the wild type or mutein proteins is regulated by the lac repressor
CC present on the plasmid prep4. The gene encoding the protein is mutated
CC at specific sites resulting in series of mutated proteins (AAR62464-83
CC and AAR63093-103). The biological activities of TNF are mediated via
CC specific receptors of mol. wt. 55 and 75 kDa called p55-TNF-R and
CC p75-TNF-R respectively. The mutated protein presented have a higher
CC affinity for the human p75-TNF receptor than for the p55-TNF receptor.
CC The mutated proteins can be used in a variety of therapeutic or
CC diagnostic applications including cancer therapy, treatment of obesity,
CC septic shock or bacterial meningitis.
XX
XX
SQ Sequence 157 AA;
Query Match 99.8%; Score 802; DB 15; Length 157;
Best Local Similarity 99.4%; Pred. No. 2.2e-75;
Matches 156; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 VRSSSRTPSDKPVAVHVPANPOAEGLOLWLRNANLLANGVELRDNOLVVPSEGLYLYS 60
DB 1 VRSSSRTPSDKPVAVHVPANPOAEGQLQWLRNANLLANGVELRDNQLVVPSEGLYLYS 60
QY 61 QVLEFKGQGCPSPTHVLLTFTISRIAVSYQTKVNLISAIRSPQORETPEGAEAKPMXEPITL 120
DB 61 QVLEFKGQGCPSPTHVLLTFTISRIAVSYQTKVNLISAIRSPQORETPEGAEAKPMXEPITL 120
QY 121 GGVFQLEKGRDLASAINRPDYLDFAESQGVYFGITALL 157
DB 121 GGVFQLEKGRDLASAINRPDYLDFAESQGVYFGITALL 157

RESULT 12
AAW28530
ID AAW28530 standard; Protein: 157 AA.
XX
XX AAW28530;

```

XX 11-JAN-1998 (first entry)
DF Human TNF.
XX TNF; tumour necrosis factor; Crohn's disease; cA2 antibody.
XX Homo sapiens.
XX Key Location/Qualifiers
FH Region 11..13
FT /label= epitope
FT Region 37..42
FT /label= epitope
FT Region 49..57
FT /label= epitope
FT Region 155..157
FT /label= epitope
FT Region 87..108
FT /label= epitope
FT Region 59..80
FT /label= epitope
XX US5656272-A.
XX 12-AUG-1997.
XX 18-MAR-1991; 91US-0670827.
XX 04-FEB-1994; 94US-0192102.
XX 18-MAR-1991; 91US-0670827.
XX 18-MAR-1992; 92US-0853606.
XX 11-SEP-1992; 92US-0943852.
XX 26-JAN-1993; 93US-0010406.
XX 02-FEB-1993; 93US-0013413.
XX (CENZ ) CENTOCOR INC.
XX (UYNY-) UNIV NEW YORK MEDICAL CENT.
XX Dadona P, Ghirayeb J, Knight D, Le J, Siegel SA;
XX Vilcek J;
XX WPI; 1997-414547/38.
XX Treatment of Crohn's disease - by administering humanised cA2
XX antibody specific for tumour necrosis factor
XX PS Claim 4 and 6; Fig 13; 87pp; English.
XX An anti-TNF chimeric antibody may be administered for treating
XX CC TNF-alpha mediated Crohn's disease in a human.
XX CC The anti-TNF chimeric antibody competitively inhibits binding of
XX CC TNF to monoclonal antibody cA2. The anti-TNF antibody does
XX CC not bind to one or more epitopes in amino acids 11-13, 37-42,
XX CC 49-57 or 155-157 of hTNF, but does bind to one or more epitopes
XX CC included in amino acids between 87-108 or both 87-108 and 59-80
XX CC of hTNF.
XX SO Sequence 157 AA:
Query Match 99.8%; Score 802; DB 18; Length 157;
Best Local Similarity 99.4%; Pred. No. 2.2e-75;
Matches 156; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
OY 1 VRSSRRPSPDKPVAAHVANPOAEQQLNRRANALLANGVELDNDQLVPSSEGLYLYS 60
Db 1 VRSSRRPSPDKPVAAHVANPOAEQQLNRRANALLANGVELDNDQLVPSSEGLYLYS 60
OY 61 QVLRKGGCPEHTVLTFTTSRIASVOTKYNLSATKSPCOREPBGAEAKPMXEPYIL 120
Db 61 QVLRKGGCPEHTVLTFTTSRIASVOTKYNLSATKSPCOREPBGAEAKPMXEPYIL 120

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OY 121 GGVFOLKEKGRSLSAEINRPDYLDFAESGQVYFGIIAL 157
Db 121 ggvfglekgdrlsaeinrpdyldfaesgvyfygltial 157
RESULT 13
AAW40819
ID AAW40819 standard; peptide; 157 AA.
XX AAW40819:
XX 02-APR-1998 (first entry)
XX Human tumour necrosis factor.
XX Tumour necrosis factor; human; hTNF; rheumatoid arthritis; malignancy;
XX anti-TNF chimeric antibody; inhibitor; therapy; diagnosis; infection;
XX chronic inflammatory disease; autoimmune disease;
XX neurodegenerative disease.
XX OS Homo sapiens.
XX Key Location/Qualifiers
FH MISC-difference 59..80
FT /note= "epitope recognised by antibody of the invention"
FT MISC-difference 87..108
FT /note= "epitope recognised by antibody of the invention"
XX US5698195-A.
XX 16-DEC-1997.
XX 18-OCT-1994; 94US-0324799.
XX 18-OCT-1994; 94US-0324799.
XX 18-MAR-1991; 91US-0670827.
XX 18-MAR-1992; 92US-0853606.
XX 11-SEP-1992; 92US-0943852.
XX 29-JAN-1993; 93US-0010406.
XX 02-FEB-1993; 93US-0013413.
XX 04-FEB-1994; 94US-0192061.
XX 04-FEB-1994; 94US-0192093.
XX 04-FEB-1994; 94US-0192102.
XX (CENZ ) CENTOCOR INC.
XX (UYNY-) UNIV NEW YORK MEDICAL CENT.
XX Dadona P, Ghirayeb J, Knight D, Le J, Siegel S;
XX Vilcek J;
XX WPI; 1998-051431/05.
XX Treatment of rheumatoid arthritis - with chimeric antibody directed
XX PT against tumour necrosis factor
XX PS Claim 3; Column 97-100; 93pp; English.
XX This sequence represents the human tumour necrosis factor (hTNF).
XX CC Epitopes of this sequence are recognised by the antibody used in the
XX CC method of the invention. The method of the invention is for treating
XX CC rheumatoid arthritis in a human, and comprises administering to the human
XX CC an effective TNF-inhibiting amount of an anti-TNF chimeric antibody (Ab),
XX CC where the anti-TNF chimeric Ab comprises a non-human variable region or a
XX CC TNF antigen binding portion of the variable region, and a human constant
XX CC region. The method can be used for in vitro, in situ and/or in vivo
XX CC diagnosis and/or treatment of animal cells, tissues or pathologies
XX CC associated with the presence of TNF. The Abs used in the method can also
XX CC be used for removing TNF from a solution or cells, inhibiting one or more
XX CC biological activities of TNF in vitro, in situ or in vitro. Such removal
XX CC can include treatment methods of the invention for alleviating symptoms
XX CC or pathologies involving TNF, such as bacterial, viral or parasitic
XX CC infections, chronic inflammatory diseases, autoimmune diseases,
XX CC malignancies and/or neurodegenerative diseases.

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XX	Sequence	157 AA:
SO	Query Match	99.88; Score 802; DB 19; Length 157;
	Best Local Similarity	99.44; Prod. No. 2.2e-75;
	Matches 156; Conservative	0; Mismatches 1; Indels 0; Gaps
OY	1 VRSSSRPPSDKPVAAVYVVAPOAEQOLQWLNRRANALLANGVELRDNLVYPSSEGLYIYS	60
Db	1 VRSSSRPPSDKPVAAVYVVAPOAEQGLQWLNRRANALLANGVELRDNLVYPSSEGLYIYS	60
OY	61 QVLEKGGCCSTHYLLHTTISRIVSQTQKYNLLSAIKSPQQRTPPGCAEAKPWKEPTYL	120
Db	61 QVLEKGGCCSTHYLLHTTISRIVSQTQKYNLLSAIKSPQQRTPPGCAEAKPWKEPTYL	120
OY	121 GGVFOLEKGRLSAEINRPDYLDFAESGQVYFGIALL	157
Db	121 GGVFOLEKGRLSAEINRPDYLDFAESGQVYFGIALL	157
RESULT 14		
AAAY23242		
ID	AAAY23242 standard; protein: 157 AA.	
AC	AAAY23242;	
XX		
DT	27-AUG-1999 (first entry)	
XX		
DE	Human tumour necrosis factor-alpha (TNF-alpha).	
XX		
KM	Human tumour necrosis factor-alpha; TNF-alpha; immune disease;	
KM	TNF-alpha mediated disease; anti-TNF chimeric antibody;	
KM	monoclonal antibody c42; autoimmune disease; inflammatory disease;	
KM	neurodegenerative disorder; cerebellar cortical degeneration;	
KM	multiple system degeneration; multi-system disorder; Senile Dementia;	
KM	amyotrophic lateral sclerosis; spinal muscular atrophy;	
KM	Alzheimer's disease; Down's Syndrome; Diffuse Lewy body disease;	
KM	Meninge-Korsakoff syndrome; chronic alcoholism;	
KM	Creutzfeldt-Jakob-disease; sub-acute sclerolisting panencephalitis;	
KM	Hallereorden-Speltz disease; dementia pugilistica; leukemia; lymphoma.	
XX		
OS	Homo sapiens.	
XX		
PN	US5919452-A.	
XX		
PD	06-JUL-1999.	
XX		
PF	04-FEB-1994; 94US-0192861.	
XX		
PR	04-FEB-1994; 94US-0192861.	
PR	18-MAR-1991; 91US-0670827.	
PR	18-MAR-1992; 92US-0853606.	
PR	11-SEP-1992; 92US-0943852.	
PR	29-JAN-1993; 93US-0010406.	
PR	02-FEB-1993; 93US-0013413.	
XX		
PA	(CENZ) CENTOCOR INC.	
PA	(UYNY) UNIV NEW YORK STATE.	
XX		
PI	Dadonna P, Chrayeb J, Knight D, Le J, Seigal S;	
PI	Vilcek J;	
XX		
DR	WPI; 1999-403943/34.	
XX		
PT	Treatment of tumour necrosis factor-alpha mediated disease using	
PT	chimeric antibodies	
XX		
PS	Claim 2; Fig 13; 90pp; English.	
XX		
CC	The present sequence represents human tumour necrosis factor-alpha	
CC	(TNF-alpha). The specification describes a method for treating	
CC	TNF-alpha mediated disease (not resulting from infection) using an	

	Query Match	Best Local Similarity	99.8%	Score 802;	DB 20;	Length 157;
	Matches 156;	Conservative	0;	Mismatches	1;	Indels 0; Gaps 0;
Qy	1	VSSSRTPSDKPFVAHVANPQAEGLQWLRNRRANMLLANGVELRDNLVVPSEGLYLIVS	60			
Db	1	VSSSRTPSDKPFVAHVANPQAEGLQWLRNRRANMLLANGVELRDNLVVPSEGLYLIVS	60			
Qy	61	QVLFKGGCPSRTHVLLTRHSIRLANSYQKVKMLSIKSPCCQREPPGGAAPKAPRYLL	120			
Db	61	QVLFKGGCPSRTHVLLTRHSIRLANSYQKVKMLSIKSPCCQREPPGGAAPKAPRYLL	120			
Qy	121	GGVFQLEKGDRLSAETINRPDYLDPAESGGVYFGIALL	157			
Db	121	GGVFQLEKGDRLSAETINRPDYLDPAESGGVYFGIALL	157			
RESULT 15						
ID	AAAG79124	standard; protein; 157 AA.				
XX	AAAG79124;					
AC						
XX						
DT						
XX						
DE	Amino acid sequence of human tumour necrosis factor (TNF)-alpha.					
XX						
KW	Human; tumour necrosis factor-alpha; TNF-alpha; chimeric antibody;					
KM	immunoglobulin; inflammation; cancer; cachexia; sepsis; endotoxin shock;					
KW	infection; chronic inflammatory disease; auto-immune disease; malignancy;					
KM	neurodegenerative disease; Crohn's disease; rheumatoid arthritis;					
KW	vascular endothelial growth factor; VEGF; VEGF-mediated disease.					
XX						
OS	Homo sapiens.					
XX						
PN	US2001027249-A1.					
XX						
PD	04-OCT-2001.					
XX						
PF	08-JAN-2001; 2001US-0756301.					
XX						
PR	11-DEC-1995; 95US-0570674.					
PR	12-AUG-1998; 98US-0133119.					
PR	18-MAR-1991; 91US-0670827.					
PR	18-MAR-1992; 92US-0853606.					
PR	11-SEP-1992; 92US-0943852.					
PR	29-JAN-1993; 93US-0010406.					
PR	02-FEB-1993; 93US-0013413.					
PR	04-FEB-1994; 94US-0192093.					
PR	04-FEB-1994; 94US-0192102.					
PR	04-FEB-1994; 94US-0192861.					
PR	18-OCT-1994; 94US-0324799.					

XX (CENZ) CENTOCOR INC.
 PA
 XX
 PI Le J, Vileek J, Daddona P, Ghayeb J, Knight D, Siegel S;
 XX
 XX WPI; 2001-615872/71.
 DR
 XX
 PT New chimeric antibody binding an epitope specific for human tumour
 PT necrosis factor alpha useful in treatment and diagnosis of tumour
 PT necrosis factor alpha related conditions e.g. Crohn's disease
 XX
 PS Disclosure; Fig 13; 93pp; English.
 XX
 CC The present sequence represents human tumour necrosis factor
 CC (TNF)-alpha. The specification describes a chimeric antibody which
 CC binds an epitope specific for human TNF-alpha. The antibody comprises
 CC at least part of a human immunoglobulin constant region and at least
 CC part of a non-human immunoglobulin variable region. The chimeric
 CC antibodies are useful in vivo diagnosis and therapy of TNF-alpha-
 CC mediated pathologies and conditions. They can also neutralize human
 CC TNF-alpha under physiological conditions. This is useful as TNF is
 CC known to be involved in e.g. pro-inflammatory actions, wasting
 CC associated with cancer and other diseases (cachexia), gram-negative
 CC sepsis and endotoxemic shock. Antibodies can be used to treat and/or
 CC diagnose bacterial, parasitic or viral infections, chronic inflammatory
 CC diseases, auto-immune diseases, malignancies and neurodegenerative
 CC diseases (such as Crohn's disease and Rheumatoid arthritis). As
 CC inhibition or antagonism of TNF also decreases the expression of
 CC vascular endothelial growth factor (VEGF), the antibodies are also
 CC useful to treat VEGF-mediated diseases.
 XX
 SQ Sequence 157 AA;

Query Match 99.8%; Score 802; DB 22; Length 157;
 Best Local Similarity 99.4%; Pred. No. 2.2e-75;
 Matches 156; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 VRSSSRTPSDKPAHVAVYVAPQAEQLOMNRANALLANGVELRDNDLVVPSGLYLIYS 60
 |||||||
 Db 1 VRSSSRTPSDKPAHVAVYVAPQAEQLOMNRANALLANGVELRDNDLVVPSGLYLIYS 60
 QY 61 QVLFKGGCGPSTHVLTHTTISRIAVSYOTKVNLSAIKSPCORETPPGAEAKPWXPPIYL 120
 |||||||
 Db 61 qvlfkgqgcpsthnllchttisriavsyqtkvnllsaikspqretppgaekpwypelyl 120
 QY 121 GGVFQLEKGRLSAEINRPDYLDFAESGQVYFGIIAL 157
 |||||||
 Db 121 ggvfqlkxgdrlsaenrpdylidfaesgvyfgyfial 157

Search completed: August 30, 2002, 17:36:15
 Job time: 748 sec

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OM protein - protein search, using sw model

Run on: August 30, 2002, 17:26:07 ; Search time 13.09 Seconds

(Without alignments)
292.938 Million cell updates/sec

Title: US-09-981-289A-20

Perfect score: 804

Sequence: 1 VRSSRRTPSDKPVAVHVPN.....RPDYDFAESGVYGIITL 157

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 231628 seqs, 24425594 residues

Total number of hits satisfying chosen parameters: 231628

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

Issued_Patents_AA:*

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	802	99.8	157	1	US-07-794-400-1
2	802	99.8	157	1	US-08-041-648-2
3	802	99.8	157	1	US-08-107-235-1
4	802	99.8	157	1	US-08-217-529-2
5	802	99.8	157	1	US-08-318-193-86
6	802	99.8	157	1	US-08-397-470-1
7	802	99.8	157	1	US-08-192-102-1
8	802	99.8	157	1	US-08-324-799-1
9	802	99.8	157	1	US-08-538-875-1
10	802	99.8	157	2	US-08-394-600B-17
11	802	99.8	157	2	US-08-500-860A-35
12	802	99.8	157	2	US-08-192-861A-1
13	802	99.8	157	2	US-08-600-783-5
14	802	99.8	157	3	US-08-584-031-13
15	802	99.8	157	3	US-08-714-960B-1
16	802	99.8	157	4	US-09-133-119-1
17	802	99.8	157	4	US-08-192-093A-1
18	802	99.8	157	5	PCT-US92-02190-1
19	802	99.8	157	5	PCT-US93-02475-1
20	802	99.8	157	5	PCT-US95-02513-17
21	802	99.8	157	6	5180811-1
22	802	99.8	177	2	US-08-394-600B-21
23	802	99.8	177	5	PCT-US95-02513-21
24	802	99.8	153	2	US-08-889-909A-3
25	802	99.8	153	4	US-09-156-163A-3
26	802	99.8	233	1	US-08-323-445A-10
27	802	99.8	233	1	US-08-515-903A-10

28	802	99.8	233	2	US-08-912-227-3	Sequence 3, Appl
29	802	99.8	233	2	US-08-230-428B-2	Sequence 2, Appl
30	802	99.8	233	4	US-08-883-086-6	Sequence 6, Appl
31	802	99.8	233	4	US-08-880-342-37	Sequence 37, Appl
32	802	99.8	233	5	PCT-US95-12840-10	Sequence 5, Appl
33	802	99.8	233	6	5422425-2	Sequence 5, Appl
34	800	99.5	157	1	US-07-940-605A-5	Sequence 5, Appl
35	800	99.5	157	2	US-08-690-096-5	Sequence 5, Appl
36	799	99.4	158	6	5182196-2	Sequence 5, Appl
37	798	99.3	158	1	US-08-323-445A-19	Sequence 19, Appl
38	797	99.1	158	1	US-07-794-400-6	Sequence 6, Appl
39	797	99.1	158	1	US-07-794-400-7	Sequence 7, Appl
40	797	99.1	158	1	US-07-794-400-8	Sequence 8, Appl
41	797	99.1	158	1	US-08-397-470-6	Sequence 6, Appl
42	797	99.1	158	1	US-08-397-470-7	Sequence 7, Appl
43	797	99.1	158	1	US-08-387-470-8	Sequence 8, Appl
44	796	99.0	158	1	US-07-794-400-4	Sequence 4, Appl
45	796	99.0	158	1	US-08-397-470-4	Sequence 4, Appl

ALIGNMENTS

RESULT 1
US-07-794-400-1
; Sequence 1, Application US/07794400
; Patent No. 5422104
; GENERAL INFORMATION:
; APPLICANT: Fiers, W.
; APPLICANT: Tavernier, J.
; APPLICANT: Van Oostede, X.
; TITLE OF INVENTION: TNF-Mutlins
; NUMBER OF SEQUENCES: 24
; CORRESPONDENCE ADDRESSES:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/794,400
; FILING DATE: 19911120
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: EP 90810901.0
; FILING DATE: 21-NOV-1990
; ATTORNEY/AGENT INFORMATION:
; NAME: Krovatin, William
; REGISTRATION NUMBER: 33256
; REFERENCE/DOCKET NUMBER: 4105/136-00
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-4387
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; TISSUE TYPE: Blood
; CELL TYPE: Macrophage
; US-07-794-400-1

Query Match 99.8%; Score 802; DB 1; Length 157;

Best Local Similarity 99.4%; Pred. No. 2.6e-79;
Matches 156; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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QY 61 QVLFKGGCPSSTHVLTHRTISRIAVSYQTKVNLISAISKSCQRETPGAGAKPMXEPYIL 120
Db 61 QVLFKGGCPSSTHVLTHRTISRIAVSYQTKVNLISAISKSCQRETPGAGAKPMXEPYIL 120
QY 121 GGVFOLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFOLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 2

US-08-041-648-2
; Sequence 2, Application US/08041648
; Patent No. 5486463
; GENERAL INFORMATION:
; APPLICANT: Lesslauer, Werner
; APPLICANT: L. Fischer, Hansruedi
; APPLICANT: St ber, Dietrich
; TITLE OF INVENTION: TNF-MUTAINS
; NUMBER OF SEQUENCES: 17
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: George M. Gould, Esq., Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: U.S.A.
; ZIP: 07110-1199
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/041,648
; FILING DATE: 1-APR-1993
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: EP 92810249.0
; FILING DATE: 2-APR-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Roseman, Catherine R.
; REGISTRATION NUMBER: 34240
; REFERENCE/DOCKET NUMBER: RAN 4105/147
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-6208
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-041-648-2

Query Match 99.8%; Score 802; DB 1; Length 157;
Best Local Similarity 99.4%; Pred. No. 2.6e-79;
Matches 156; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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QY 61 QVLFKGGCPSSTHVLTHRTISRIAVSYQTKVNLISAISKSCQRETPGAGAKPMXEPYIL 120
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QY 121 GGVFOLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFOLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 3

US-08-107-235-1
; Sequence 1, Application US/08107235
; Patent No. 5587457
; GENERAL INFORMATION:
; APPLICANT: Rathjen, Deborah A
; APPLICANT: Ferrante, Antonio
; APPLICANT: Widmer, Fred
; TITLE OF INVENTION: Neutrophil Stimulating Peptides
; NUMBER OF SEQUENCES: 19
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Allegretti & Witcoff, Ltd.
; STREET: 10 S. Wacker Dr.
; CITY: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60606
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/107,235
; FILING DATE: 16-AUG-1993
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/930,415
; FILING DATE: 12-MAR-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: McDonnell, John J
; REGISTRATION NUMBER: 26,949
; REFERENCE/DOCKET NUMBER: 92,622A
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312-715-1000
; TELEFAX: 312-715-1234
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; FEATURE:
; NAME/KEY: Peptide
; LOCATION: 1..157
; OTHER INFORMATION: /note= "HUMAN TNF"
; US-08-107-235-1

Query Match 99.8%; Score 802; DB 1; Length 157;
Best Local Similarity 99.4%; Pred. No. 2.6e-79;
Matches 156; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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QY 61 QVLFKGGCPSSTHVLTHRTISRIAVSYQTKVNLISAISKSCQRETPGAGAKPMXEPYIL 120
Db 61 QVLFKGGCPSSTHVLTHRTISRIAVSYQTKVNLISAISKSCQRETPGAGAKPMXEPYIL 120
QY 121 GGVFOLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVFOLEKGDRLSAEINRPDYLDFAESGQVYFGIALL 157

RESULT 4
US-08-217-529-2

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; Sequence 2, Application US/08217529
; Patent No. 5597899
; GENERAL INFORMATION:
; APPLICANT: Banner, David
; APPLICANT: Lessner, Werner
; APPLICANT: Lotscher, Hansreudt
; APPLICANT: Stuber, Dietrich
; TITLE OF INVENTION: Tumor Necrosis Factor Mutelins
; NUMBER OF SEQUENCES: 7
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: George M. Gould, Esq., Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: U.S.
; ZIP: 07110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/217,529
; FILING DATE: 24-MAR-1994
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: EP 93810224.1
; FILING DATE: 29-MAR-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Roseman, Catherine R
; REGISTRATION NUMBER: 34240
; REFERENCE//DOCKET NUMBER: 4105/155
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-6208
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-217-529-2

Query Match          99.8%; Score 802; DB 1; Length 157;
Best Local Similarity 99.4%; Pred. No. 2.6e-79;
Matches 156; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Foley & Lardner
; STREET: 1800 Diagonal Road, Suite 500
; CITY: Alexandria
; STATE: Virginia
; COUNTRY: USA
; ZIP: 22313-0299
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/318,193
; FILING DATE:
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/07/935,314
; FILING DATE:
; APPLICATION NUMBER: US 07/224,568
; ATTORNEY/AGENT INFORMATION:
; NAME: BENT, Stephen A.
; REGISTRATION NUMBER: 29,768
; REFERENCE//DOCKET NUMBER: 18740/116 CACO
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (703)836-9300
; TELEFAX: (703)683-4109
; TELEX: 899149
; INFORMATION FOR SEQ ID NO: 86:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-318-193-86

Query Match          99.8%; Score 802; DB 1; Length 157;
Best Local Similarity 99.4%; Pred. No. 2.6e-79;
Matches 156; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/397,470
FILING DATE: 01-MAR-1995
CLASSIFICATION: 435
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: US 07/794,400
FILING DATE: 20-NOV-1991
APPLICATION NUMBER: EP 90810901.0
FILING DATE: 21-NOV-1990
ATTORNEY/AGENT INFORMATION:
NAME: Krovatin, William
REGISTRATION NUMBER: 33256
REFERENCE/DOCKET NUMBER: 4105/136-00
TELECOMMUNICATION INFORMATION:
TELEPHONE: (201) 235-4387
TELEFAX: (201) 235-3500
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
TISSUE TYPE: Blood
CELL TYPE: Macrophage
US-08-397-470-1
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Query Match          99.8%; Score 802; DB 1; Length 157;
Best Local Similarity 99.4%; Pred. No. 2,6e-79;
Matches 156; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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QY 61 QVLFKGGCGPSTHVLLTHRTISRIAVSYQTKVNLISAIKSPCORETEPEGAEAKPWXPYIYL 120
DB 61 QVLFKGGCGPSTHVLLTHRTISRIAVSYQTKVNLISAIKSPCORETEPEGAEAKPWXPYIYL 120
QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGOVYFGIIAL 157
DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGOVYFGIIAL 157
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RESULT 7
US-08-192-102-1
Sequence 1, Application US/08192102
Patent No. 5656272
GENERAL INFORMATION:
APPLICANT: Le, Junming
APPLICANT: Vilcek, Jan
APPLICANT: Daddona, Peter E.
APPLICANT: Ghayeb, John
APPLICANT: Knight, David M.
APPLICANT: Siegel, Scott A.
TITLE OF INVENTION: ANTI-TNF ANTIBODIES AND ASSAYS EMPLOYING
NUMBER OF SEQUENCES: 19
CORRESPONDENCE ADDRESS:
ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
STREET: Two Militia Drive
CITY: Lexington
STATE: Massachusetts
COUNTRY: USA
ZIP: 02173
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/192,102
FILING DATE: 04-FEB-1994
CLASSIFICATION: 424
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: US/08/192,093
FILING DATE: 04-FEB-1994
APPLICATION NUMBER: US 08/013,413
FILING DATE: 02-FEB-1993
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: US 08/010,406
FILING DATE: 29-JAN-1993
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: US 07/943,852
FILING DATE: 11-SEP-1992
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: US 07/853,606
FILING DATE: 18-MAR-1992
APPLICATION NUMBER: US 07/670,827
FILING DATE: 18-MAR-1991
ATTORNEY/AGENT INFORMATION:
NAME: Brook, David E.
REGISTRATION NUMBER: 22,592
REFERENCE/DOCKET NUMBER: NY093-01M3
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 861-6240
TELEFAX: (617) 861-9540
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-192-102-1
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Query Match          99.8%; Score 802; DB 1; Length 157;
Best Local Similarity 99.4%; Pred. No. 2,6e-79;
Matches 156; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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DB 1 VRSSRTPSDKPYAHVAVNPQAEGLQWLNRRANALLANGVELRDQNLVVPSEGLYIYS 60
QY 61 QVLFKGGCGPSTHVLLTHRTISRIAVSYQTKVNLISAIKSPCORETEPEGAEAKPWXPYIYL 120
DB 61 QVLFKGGCGPSTHVLLTHRTISRIAVSYQTKVNLISAIKSPCORETEPEGAEAKPWXPYIYL 120
QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGOVYFGIIAL 157
DB 121 GGVFQLEKGDRLSAEINRPDYLDFAESGOVYFGIIAL 157
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RESULT 8
US-08-324-799-1
Sequence 1, Application US/08324799
Patent No. 5698195
GENERAL INFORMATION:
APPLICANT: Le, Junming
APPLICANT: Vilcek, Jan
APPLICANT: Daddona, Peter E.
APPLICANT: Ghayeb, John
APPLICANT: Knight, David M.
APPLICANT: Siegel, Scott A.
TITLE OF INVENTION: ANTI-TNF ANTIBODIES AND PEPTIDES
NUMBER OF SEQUENCES: 19
CORRESPONDENCE ADDRESS:
ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
STREET: Two Militia Drive
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Db 61 QVLFKGGCSTHVLTHRTISRAVSYQTKVNLISAIKSPCQRETPGAEAKPWEPYIL 120
QY 121 GGVEFQLEKGDRLSAETINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVEFQLEKGDRLSAETINRPDYLDFAESGQVYFGIALL 157

RESULT 10

US-08-394-600B-17
; Sequence 17, Application US/08394600B
; Patent No. 5843693
; GENERAL INFORMATION:
; APPLICANT: Halebeck, Robert F.
; APPLICANT: Jewell, David A.
; APPLICANT: Kochs, Kirston E.
; APPLICANT: Kriegluer, Michael
; APPLICANT: Perez, Carl
; TITLE OF INVENTION: Compositions for the inhibition of
; TITLE OF INVENTION: Protein Hormone Formation and Uses Thereof
; NUMBER OF SEQUENCES: 28
; CORRESPONDENCE ADDRESSES:
; ADDRESSEE: McAndrews, Held & Malloy, Ltd.
; STREET: 500 West Madison Street, 34th Floor
; CITY: Chicago
; STATE: Illinois
; COUNTRY: United States of America
; ZIP: 60661
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: IBM PC compatible
; SOFTWARE: Patent Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; FILING DATE: 02/27/95
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Donald J. Pochopien
; REGISTRATION NUMBER: 32,167
; REFERENCE/DOCKET NUMBER: 820.005/118500S05
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 312/707-8889
; TELEFAX: 312/707-9135
; TELEX:
; INFORMATION FOR SEQ ID NO: 17:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 157 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-394-600B-17

Query Match 99.8%; Score 802; DB 2; Length 157;
Best local Similarity 99.4%; Pred. No. 2.6e-79;
Matches 156; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 VRSSRTPSDKPYAHVAVNPQAEGLQWLNRANALLANGVELRDQVLVPSEGLYLIYS 60
Db 1 VRSSRTPSDKPYAHVAVNPQAEGLQWLNRANALLANGVELRDQVLVPSEGLYLIYS 60
QY 61 QVLFKGGCSTHVLTHRTISRAVSYQTKVNLISAIKSPCQRETPGAEAKPWEPYIL 120
Db 61 QVLFKGGCSTHVLTHRTISRAVSYQTKVNLISAIKSPCQRETPGAEAKPWEPYIL 120
QY 121 GGVEFQLEKGDRLSAETINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVEFQLEKGDRLSAETINRPDYLDFAESGQVYFGIALL 157

RESULT 11
US-08-500-860A-35
; Sequence 35, Application US/08500860A

; Patent No. 5891679
; GENERAL INFORMATION:
; APPLICANT: LUCAS, RUDOLPH
; APPLICANT: DE BASTSEILER, PATRICK
; APPLICANT: FRANKEN, LUCIE
; APPLICANT: SABLOM, ERWIN
; TITLE OF INVENTION: TNF-MUTAINS, A PROCESS FOR PREPARING THEM AND
; TITLE OF INVENTION: THEIR USE AS ACTIVE SUBSTANCES IN PHARMACEUTICAL COMPOSITIO
; NUMBER OF SEQUENCES: 36
; CORRESPONDENCE ADDRESSES:
; ADDRESSEE: NIXON & VANDERHYE P.C.
; STREET: 1100 NORTH GLEBE ROAD
; CITY: ARLINGTON
; STATE: VIRGINIA
; COUNTRY: U.S.A.
; ZIP: 22201-4714

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/500,860A
FILING DATE:
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: BYRNE, THOMAS E.
REGISTRATION NUMBER: 32,205
REFERENCE/DOCKET NUMBER: 1487-8
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)816-4100
TELEFAX: (703)816-4100
TELEX: 200797 NIXN UR
INFORMATION FOR SEQ ID NO: 35:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-500-860A-35

Query Match 99.8%; Score 802; DB 2; Length 157;
Best local Similarity 99.4%; Pred. No. 2.6e-79;
Matches 156; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Db 1 VRSSRTPSDKPYAHVAVNPQAEGLQWLNRANALLANGVELRDQVLVPSEGLYLIYS 60
QY 61 QVLFKGGCSTHVLTHRTISRAVSYQTKVNLISAIKSPCQRETPGAEAKPWEPYIL 120
Db 61 QVLFKGGCSTHVLTHRTISRAVSYQTKVNLISAIKSPCQRETPGAEAKPWEPYIL 120
QY 121 GGVEFQLEKGDRLSAETINRPDYLDFAESGQVYFGIALL 157
Db 121 GGVEFQLEKGDRLSAETINRPDYLDFAESGQVYFGIALL 157

RESULT 12
US-08-192-861A-1
; Sequence 1, Application US/08192861A
; Patent No. 5919452
; GENERAL INFORMATION:
; APPLICANT: Le, Junning
; APPLICANT: Vilcek, Jan
; APPLICANT: Daddona, Peter E.
; APPLICANT: Grayeb, John
; APPLICANT: Knight, David M.
; APPLICANT: Siegel, Scott A.
; TITLE OF INVENTION: METHODS OF TREATING TNF-MEDIATED DISEASE USING
; TITLE OF INVENTION: CHIMERIC ANTI-TNF ANTIBODIES (As Amended)

QY 121 GGVFQLEKGRSLSAEINRPDYLDFAESGQYFGIIL 157
Db 121 GGVFQLEKGRSLSAEINRPDYLDFAESGQYFGIIL 157

RESULT 14
US-08-584-031-13
; Sequence 13, Application US/08584031A
; Patent No. 6030945
; GENERAL INFORMATION:
; APPLICANT: Ashkenazi, Avi J.
; TITLE OF INVENTION: APO-2 LIGAND
; FILE REFERENCE: 11669.22US03
; CURRENT APPLICATION NUMBER: US/08/584,031A
; CURRENT FILING DATE: 1996-01-09
; NUMBER OF SEQ ID NOS: 17
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 13
; LENGTH: 157
; TYPE: PRT
; ORGANISM: Homo sapiens
US-08-584-031-13

Query Match 99.8%; Score 802; DB 3; Length 157;
Best Local Similarity 99.4%; Pred. No. 2.6e-79;
Matches 156; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 VRSSRRPSPDKPVAHVYVNPQAEQQLWLNRRANALLANGVELRDNDLVVPSGLYLIYS 60
Db 1 VRSSRRPSPDKPVAHVYVNPQAEQQLWLNRRANALLANGVELRDNDLVVPSGLYLIYS 60

QY 61 QVLEKGGCCPSTHVLTHHTISRIAVSYQTKYNLSAIKSPCQRETPEGAEKPMXEPYIL 120
Db 61 QVLEKGGCCPSTHVLTHHTISRIAVSYQTKYNLSAIKSPCQRETPEGAEKPMXEPYIL 120

QY 121 GGVFQLEKGRSLSAEINRPDYLDFAESGQYFGIIL 157
Db 121 GGVFQLEKGRSLSAEINRPDYLDFAESGQYFGIIL 157

RESULT 15
US-08-714-960B-1
; Sequence 1, Application US/08714960B
; Patent No. 6121237
; GENERAL INFORMATION:
; APPLICANT: RATHJEN, Deborah A
; TITLE OF INVENTION: Neutrophil Stimulating Peptides
; NUMBER OF SEQUENCES: 19
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BANNER & WITCOFF, LTD.
; STREET: 10 S. Wacker Drive, Suite 3000
; City: Chicago
; STATE: Illinois
; COUNTRY: USA
; ZIP: 60606
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 1.44 Mb storage diskette, 3.50 inch
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: IBM compatible PC/MS-DOS
; SOFTWARE: WordPerfect version 6.1
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/714,960B
; FILING DATE: 17-SEP-1996
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: AU P39065
; FILING DATE: 12-MAR-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/AU91/00086
; FILING DATE: 12-MAR-1991
; PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/930,415
FILING DATE: 09-NOV-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/107,235
FILING DATE: 16-AUG-1993
ATTORNEY/AGENT INFORMATION:
NAME: Resis, Robert H.
REGISTRATION NUMBER: 32,168
REFERENCE/DOCKET NUMBER: 92,622-B
TELECOMMUNICATION INFORMATION:
TELEPHONE: (312) 715-1000
TELEFAX: (312) 715-1234
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 157 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: not relevant
MOLECULE TYPE: protein
FEATURE:
NAME/KEY: Protein
LOCATION: 1..157
OTHER INFORMATION: /note="Human TNF"
US-08-714-960B-1

Query Match 99.8%; Score 802; DB 3; Length 157;
Best Local Similarity 99.4%; Pred. No. 2.6e-79;
Matches 156; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 VRSSRRPSPDKPVAHVYVNPQAEQQLWLNRRANALLANGVELRDNDLVVPSGLYLIYS 60
Db 1 VRSSRRPSPDKPVAHVYVNPQAEQQLWLNRRANALLANGVELRDNDLVVPSGLYLIYS 60

QY 61 QVLEKGGCCPSTHVLTHHTISRIAVSYQTKYNLSAIKSPCQRETPEGAEKPMXEPYIL 120
Db 61 QVLEKGGCCPSTHVLTHHTISRIAVSYQTKYNLSAIKSPCQRETPEGAEKPMXEPYIL 120

QY 121 GGVFQLEKGRSLSAEINRPDYLDFAESGQYFGIIL 157
Db 121 GGVFQLEKGRSLSAEINRPDYLDFAESGQYFGIIL 157

Search completed: August 30, 2002, 17:36:34
Job time: 627 sec

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OM protein - protein search, using sw model

Run on: August 30, 2002, 17:31:12 ; Search time 16.71 Seconds

(Without alignments)
902.814 Million cell updates/sec

Title: US-09-981-289A-20

Perfect score: 804
Sequence: 1 VRSSRRTPSDKPVAAHVANP.....RPDYLPFAESGQVFGIITL 157

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283138 seqs, 96089334 residues

Total number of hits satisfying chosen parameters: 283138

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%

Listing first 45 summaries

Database :
1: p1r1:*
2: p1r2:*
3: p1r3:*
4: p1r4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	802	99.8	233	1 QWHUN	tumor necrosis fac
2	795	98.9	233	1 S22052	tumor necrosis fac
3	728	90.5	233	2 S11688	tumor necrosis fac
4	720	89.6	234	1 JQ1344	tumor necrosis fac
5	698.5	86.9	232	1 S12606	tumor necrosis fac
6	657.5	81.8	235	1 QWMSN	tumor necrosis fac
7	652	81.1	185	2 S52715	tumor necrosis fac
8	652	81.1	233	1 S24642	tumor necrosis fac
9	651.5	81.0	235	2 S15490	tumor necrosis fac
10	650	80.8	234	1 JH0529	tumor necrosis fac
11	645.5	80.3	193	2 S06192	tumor necrosis fac
12	643.5	80.0	234	1 A25451	tumor necrosis fac
13	642.5	79.9	235	2 JU0029	tumor necrosis fac
14	265.5	33.0	197	1 JH0309	tumor necrosis fac
15	259.5	32.3	204	1 S24641	lymphotoxin - bovl
16	254.5	31.7	204	1 S17289	tumor necrosis fac
17	247	30.7	202	1 JN0869	tumor necrosis fac
18	244.5	30.4	202	1 B27303	tumor necrosis fac
19	218.5	27.2	205	1 QWHUX	lymphotoxin alpha
20	175.5	21.8	278	2 A49286	fes ligand - rat
21	173.5	21.6	279	2 A53066	fes ligand - mouse
22	162	20.1	244	2 A46062	lymphotoxin beta -
23	158	19.7	281	2 I38707	fes ligand - human
24	132	16.4	306	2 I49139	lymphotoxin-beta -
25	125	15.5	260	2 S21738	CD40 ligand - mous
26	121	15.0	261	2 I53476	CD40 ligand - huma
27	117	14.6	261	2 S53090	complement C5 prec
28	78	9.7	1680	1 C5MS	hypothetical prote
29	76.5	9.5	213	2 AF2283	

30	76	9.5	430	2 AG2256	dihydroilipamide S
31	75.5	9.4	887	2 AD2009	hypothetical prote
32	74.5	9.3	288	2 A83443	probable transcrip
33	74	9.2	799	2 C82929	ATP synthase alpha
34	73.5	9.1	385	2 AH2269	heterocyst specifl
35	73.5	9.1	993	2 G84632	probable GntR-fam1
36	73	9.1	230	2 A95354	CD30 ligand - huma
37	73	9.1	234	2 A40710	D2007.2 protein -
38	72	9.0	195	2 S44788	conserved hypochet
39	72	9.0	386	2 B75516	hypothetical prote
40	72	9.0	4077	2 T17484	surface antigen CD
41	71	8.8	193	2 A40738	hypothetical prote
42	71	8.8	265	2 B84108	sapc protein homol
43	71	8.8	295	2 C64134	hypothetical prote
44	70.5	8.7	217	2 F86343	hypothetical prote
45	70	8.7	167	2 B71553	

ALIGNMENTS

RESULT 1
QWHUN
tumor necrosis factor alpha precursor [validated] - human
N:Alternate names: cachectin; TNFA
C:Species: Homo sapiens (man)
C>Date: 28-Aug-1985 #sequence, revision 28-Aug-1985 #text, change 08-Dec-2000
C:Accession: A93585; S36153; A93351; A44189; B61478; I53311; S62610; I54522; A01646;
R:Nedwin, G.E.; Naylor, S.L.; Sakaguchi, A.Y.; Smith, D.; Jarrett-Nedwin, J.; Pennica
Nucleic Acids Res. 13, 6361-6373, 1985
A:Title: Human lymphotoxin and tumor necrosis factor genes: structure, homology and c
A:Reference number: A93585; MUID:86016093
A:Accession: A93585
A:Molecule type: DNA
A:Residues: 1-233 <NED>
A:Cross-references: GB:X02910; GB:X02159; NID:g37209; PIDN:CAA26669.1; PID:g37210
R:Irish, F.J.M.; Bougueteloret, L.; Prieur, S.; Caterina, D.; Primas, G.; Petrof, V.; Ju
Nature Genet. 3, 137-145, 1993
A:Title: Dense Alu clustering and a potential new member of the NFkappaB family with
A:Reference number: S36152; MUID:93272029
A:Accession: S36153
A>Status: nucleic acid sequence not shown; translation not shown
A:Molecule type: DNA
A:Residues: 1-233 <IRI>
A:Cross-references: EMBL:Z15026; NID:g37211; PIDN:CAAT8745.1; PID:g37212
A>Note: the nucleotide sequence was submitted to the EMBL Data Library, August 1992
R:Pennica, D.; Nedwin, G.E.; Hayflick, J.S.; Seeburg, P.H.; Derynck, R.; Palladino, M
Nature 312, 724-729, 1984
A:Title: Human tumour necrosis factor: precursor structure, expression and homology t
A:Reference number: A93351; MUID:85086244
A:Accession: A93351
A:Molecule type: mRNA
A:Residues: 1-233 <PEN>
A:Cross-references: GB:X02910; GB:X02159; NID:g37209; PIDN:CAA26669.1; PID:g37210
A>Note: this protein was isolated from the monocytic-like cell line HL-60 from a promy
R:Meng, A.M.; Cresssey, A.A.; Ladner, M.B.; Lin, L.S.; Strickler, J.; Van Arsdel, J.N
Science 228, 149-154, 1985
A:Title: Molecular cloning of the complementary DNA for human tumor necrosis factor.
A:Reference number: A44189; MUID:85142190
A:Accession: A44189
A:Molecule type: mRNA
A:Residues: 1-62, 'S', 64-233 <MAN>
A:Cross-references: GB:M10968; NID:g339737; PIDN:AAA61198.1; PID:g339738
R:Fukuda, S.; Ando, S.; Sanou, O.; Tanial, M.; Fujii, M.; Masaki, N.; Nakamura, K.I.;
Lymphokine Res. 7, 175-185, 1988
A:Title: Simultaneous production of natural human tumor necrosis factor-alpha, -beta
A:Reference number: A61478; MUID:88301617
A:Accession: B61478
A:Molecule type: Protein
A:Residues: 83-102;109-119;121-128, 'X', 130-131,142-144, 'X', 146, 'XXX', 150-152,159-174;
R:Marmentout, A.; Franssen, L.; Taverneier, J.; Van Der Heyden, J.; Tilard, R.; Kawashim
Eur. J. Biochem. 152, 515-522, 1985
A:Title: Molecular cloning and expression of human tumor necrosis factor and comparis

A:Reference number: 153311; MUID:86030296
A:Accession: 153311
A:Status: translated from GB/EMBL/DBJ
A:Molecule type: DNA
A:Residues: 1-233 <MAR>
A:Cross-references: GB:M26331; NID:g339763; PIDN:AAA36758.1; PID:g339764
A:Experimental source: U-937 cells
R:Takahara-Yamamoto, R.; Yamamoto, S.; Fukuda, S.; Kurimoto, M.
Eur. J. Biochem. 235 431-437 1996
A:Title: O-Glycosylated species of natural human tumor-necrosis factor-alpha.
A:Reference number: S62610; MUID:96202967
A:Accession: S62610
A:Molecule type: protein
A:Residues: 77-99 <TK>
R:D'Alfonso, S.; Ricciardi, P.M.
Immunogenetics 39, 150-154, 1994
A:Title: A polymorphic variation in a putative regulation box of the TNFA promoter region
A:Reference number: 154522; MUID:94102809
A:Accession: 154522
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: DNA
A:Residues: 1-8 <DAL>
A:Cross-references: GB:S68530; NID:g544751
R:Stevenson, F.T.; Bursten, S.L.; Locksley, R.M.; Lovett, D.H.
J. Exp. Med. 176, 1053-1062, 1992
A:Title: Myristyl acylation of the tumor necrosis factor alpha precursor on specific lys
A:Reference number: A59163; MUID:93018820
A:Contents: annotation; Identification of myristylated lysines
R:Aggarwal, B.B.; Kohr, W.J.; Hass, P.E.; Moffat, B.; Spencer, S.A.; Henzel, W.J.; Brink
J. Biol. Chem. 260, 2345-2354, 1985
A:Title: Human tumor necrosis factor. Production, purification, and characterization.
A:Reference number: A92511; MUID:85130974
A:Contents: annotation; disulfide bond
C:Comment: Secreted from mitogen-activated macrophages within 4-24 hours after induction
out detriment to normal cells. It can also act synergistically with interferon gamma to
C:Comment: TNF-alpha and -beta (lymphotoxin) are the products of different genes closely
related and are produced by different cell types and have different induction kinetics.
C:Genetics:
A:Gene: GDB:TNF; TNFA
A:Cross-references: GDB:120441; OMIM:191160
A:Map position: 6p21.3-6p21.3
A:introns: 62/3; 78/1; 94/1
C:Complex: homotrimer
C:Superfamily: tumor necrosis factor
C:Keywords: cytokine; cytotoxin; glycoprotein; homotrimer; lipoprotein; lymphokine; macr
F.1-76/Domain: propeptide #status predicted <Pro>
F.77-233/Product: tumor necrosis factor #status experimental <MAR>
F.119_20/Binding site: myristate (lys) (covalent) #status experimental
F.81/Binding site: carbohydrate (Ser) (covalent) (partial) #status experimental
F.145-177/Disulfide bonds: #status experimental

Query Match	99.88;	Score 802;	DB 1;	Length 233;
Best Local Similarity	99.44;	Pred. No. 9.9e-76;		
Matches 156;	Conservative 0;	Mismatches 1;	Indels 0;	Gaps 0;
QY 1 VRSSRTPSPKPAHVYVANOAEQOLWLNRRANLLANGVELRDNLVPSSEGLIYIS 60				
DB 77 VRSSRTPSPKPAHVYVANOAEQOLWLNRRANLLANGVELRDNLVPSSEGLIYIS 136				
QY 61 QVLEKGGCGSTHVLHTHTISRIAVSYOTKVNLLSAIKSPCQRETPPEGAAPWXPPIYL 120				
DB 137 QVLEKGGCGSTHVLHTHTISRIAVSYOTKVNLLSAIKSPCQRETPPEGAAPWXPPIYL 196				
QY 121 GGVEOLEKGDRLSAETNRPTLDFAESGQVYFGIALL 157				
DB 197 GGVEOLEKGDRLSAETNRPTLDFAESGQVYFGIALL 233				

RESULT 2
S22052
tumor necrosis factor alpha precursor - baboon
C:/Species: Papio sp (baboon)

C.Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 04-Feb-2000
C.Accession: S22052
R:Sanjwalwa, M.; Edwards, A.
submitted to the EMBL Data Library, September 1991
A.Description: Baboon Tumor Necrosis Factor Derived from Sequences of Genomic DNA
A.Reference number: S22052
A.Accession: S22052
A.Status: preliminary
A.Molecule type: DNA
A.Residues: 1-233 <SAN>
A.Cross-References: EMBL:X62141; NID:g38159; PIDN:CAAA4068.1; PID:g38160
C.Genetics:
A.Introns: 62/3; 78/1; 94/1
C.Superfamily: tumor necrosis factor
C.Keywords: glycoprotein; lipoprotein; myristylation; transmembrane protein
F.19/20/Binding site: myristate (lys) (covalent) #status predicted
F.145/Binding site: carbohydrate (Ser) (covalent) #status predicted
F.145-177/Disulfide bonds: #status predicted

Query Match	98.9%	Score	795	DB 1:	Length	233
Best Local Similarity	98.7%	Pred	No. 5.3e-75			
Matches	155	Conservative	0	Mismatches	2	Indels
						Gaps
						0

QY	1	VSSSRTPSDKVAHVAVNPQAEQQLQWLRNRANALLANGVELRDNLQVVPSEGLIYIS	60
DB	77	VSSSRTPSDKRVAVHVAVNPQAEQQLWLRNRANALLANGVELRDNLQVVPSEGLIYIS	136
QY	61	QVLFKGGGCPSTHVLTTHTISRIVASYQTKVNLISAKSPCORETEPEGAEKPMXEPYL	120
DB	137	QVLFKGGGCPSTHVLTTHTISRIVASYQTKVNLISAKSPCORETEPEGAEKPMXEPYL	196
QY	121	GGVFQLEKGDRLSAELINRPDYLDFAESGGVYFGIALL	157
DB	197	GGVFQLEKGDRLSAELINRPDYLDFAESGGVYFGIALL	233

RESULT 3
S11688
tumor necrosis factor alpha precursor - cat
C:Species: Felis silvestris catus (domestic cat)
C:Date: 21-Nov-1993 #sequence_rev10-Nov-1995 #text_change 04-Feb-2000
C:Accession: S11688
R:McGraw, R.A.; Coffee, B.W.; Otto, C.M.; Drews, R.T.; Rawlings, C.A.
Nucleic Acids Res. 18, 5563, 1990
A:Title: Gene sequence of feline tumor necrosis factor alpha.
A:Reference number: S11688; M01D:9101860
A:Accession: S11688
A:Status: preliminary
A:Molecule type: DNA
A:Residues: 1-233 <MG>
A:Cross-references: EMBL:X54000; NID:g1084; PIDN:CAA37948.1; PID:g255777
C:Genetics:
A:introns: 62/3; 78/1; 94/1
C:Superfamily: tumor necrosis factor
C:Keywords: glycoprotein; lipoprotein; myristylation; transmembrane protein
F:19_20/Binding site: myristate (lys) (covalent) #status predicted
F:81/Binding site: carboxylate (Ser) (covalent) #status predicted
F:145-177/Disulfide bonds: #status predicted

[illegible]

A:Molecule type: DNA
A:Residues: 1-235 <SEM>
A:Cross-references: GB:Y00467; NID:g54830; PIDN:CAA68530.1; PID:g54832
R:Penhies, D.; Hayflick, J.S.; Bringham, T.S.; Palladino, M.A.; Goeddel, D.V.
Proc. Natl. Acad. Sci. U.S.A. 82, 6060-6064, 1985
A:Title: Cloning and expression in *Escherichia coli* of the cDNA for murine tumor necrosis factor
A:Accession: A25164
A:Molecule type: mRNA
A:Residues: 1-235 <EN>
A:Cross-references: GB:M11731; NID:g202084; PIDN:AAA40458.1; PID:g202085
R:Rensen, L.; Muller, R.; Marmenout, A.; Tavernier, J.; van der Heyden, J.; Kawashima, M.
Nucleic Acids Res. 13, 4417-4429, 1985
A:Title: Molecular cloning of mouse tumor necrosis factor cDNA and its eukaryotic expression
A:Accession: A23127
A:Molecule type: mRNA
A:Residues: 1-235 <FRA>
A:Cross-references: GB:X02611; NID:g54844; PIDN:CAA26457.1; PID:g54845
R:Cseh, K.; Beutler, B.
J. Biol. Chem. 264, 16256-16260, 1989
A:Title: Alternative cleavage of the cachectin/tumor necrosis factor propeptide results in different biological activities
A:Reference number: A34251; MUID:89380231
A:Accession: A34251
A:Molecule type: protein
A:Residues: 70-87 <CSE>
R:Capit, D.; Beutler, B.; Hartog, K.; Thayer, R.; Brown-Shimer, S.L.; Cerami, A.
Proc. Natl. Acad. Sci. U.S.A. 83, 1670-1674, 1986
A:Title: Identification of a common nucleotide sequence in the 3'-untranslated region of the mouse tumor necrosis factor gene
A:Reference number: T59058; MUID:86149365
A:Accession: T59058
A>Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: mRNA
A:Residues: 1-230, 'R', 232-235 <RES>
A:Cross-references: GB:M13049; NID:g202082; PIDN:AAA40457.1; PID:g202083
R:Sherry, B.; Jue, D.M.; Zentella, A.; Cerami, A.
Biochem. Biophys. Res. Commun. 173, 1072-1078, 1990
A:Title: Characterization of high molecular weight glycosylated forms of murine tumor necrosis factor
A:Reference number: A36696; MUID:91097531
A:Accession: A36696
A:Molecule type: protein
A:Residues: 80-85, 'X', 87-99 <SHE>
C:Genetics:
A:Introns: 62/3; 81/1; 97/1
A>Note: the first intron occurs in the 5'-untranslated region
C:Superfamily: tumor necrosis factor
C:Keywords: cytokine; cytotoxin; glycoprotein; lipoprotein; lymphokine; macrophage; membrane protein
F:80-235/Product: tumor necrosis factor #status experimental <MAT>
F:20/Binding site: myristate (lys) (covalent) #status predicted
F:84/Binding site: carboxylate (ser) (covalent) #status predicted
F:86/Binding site: carboxylate (asn) (covalent) #status predicted
F:148-179/Disulfide bonds: #status predicted

tumor necrosis factor alpha precursor - bovine (fragment)
C:Species: Bos primigenius taurus (cattle)
C:Date: 19-May-1995 #sequence_revision 21-Jul-1995 #text_change 04-Feb-2000
C:Accession: S52715
R:Meritens, B.; Gaidulis, L.
submitted to the EMBL Data Library, March 1995
A:Description: Cloning and sequence analysis of cDNAs encoding bovine CD40 ligand and
A:Reference number: S52715
A:Accession: S52715
A:Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-185 <MEM>
A:Cross-references: EMBL:Z48808; NID:g755701; PIDN:CAA88743.1; PID:g755702
C:Superfamily: tumor necrosis factor
C:Keywords: glycoprotein
F:33/Binding site: carbonylrate (Ser) (covalent) #status predicted
F:97-129/Disulfide bonds: #status predicted

Query Match	81.1%	Score 652	DB 2	Length 185
Best Local Similarity	80.3%	Pred. No. 2.9e-60		
Matches 126	Conservative 15	Mismatches 16	Indels 0	Gaps 0
QY	1	VRSSTRPEDKRVAVHVAAPQAGOLWNRANLVLANGVELRDNOCLVPSEGLYLAYS	60	
	:	: : : : : :		
DB	29	LMSQDASSNKRVAAHVADINSPGOLRMTDSTANLMLANGVLELDNQLVPPADGLLYLS	88	
QY	61	QVLFKGGGCPSTHVLTHTISHIAVSYOTKYNLISAISPCQRETPEGAEAKPMKEPYTL	120	
	:	: : : : : :		
DB	89	QVLFKGGGCPSTPLELTHTISHIAVSYCTKYNLISAISPCCHRETPEMAEKPMKEPYIQ	148	
QY	121	GGVFOLEKGRDLIAEINRPDIYLDPAESGVYTGIAL	157	
	:	: : : : : :		
DB	149	GGVFOLEKGRDLIAEINRPDIYLDPAESGVYTGIAL	185	

RESULT 8

S24642

tumor necrosis factor alpha precursor - bovine

C:Species: Bos primigenius taurus (cattle)

C:Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 04-Feb-2000

C:Accession: I46047; S24642

R:Clndnts, I.; Cleuter, Y.; Kettmann, R.; Burny, A.; Droogmans, L.

C:Cycle 5, 336-341, 1993

A>Title: Cloning and characterization of the tandemly arranged bovine lymphotoxin and

A:Reference number: I46046; MWID:94083525

A:Accession: I46047

A:Status: preliminary; translated from GB/EMBL/DBD

A:Molecule type: DNA

A:Residues: 1-233 <CL2>

A:Cross-references: EMBL:Z1A137; NID:g796; PIDN:CAA78511.1; PID:g798

C:Genetics:

A:Gene: TNFA

A:Introns: 62/3; 78/1; 94/1

C:Superfamily: tumor necrosis factor

C:Keywords: glycoprotein; lipoprotein; myristylation; transmembrane protein

F:20/Binding site: myristate (lys) (covalent) #status predicted

F:81/Binding site: carbohydrate (Ser) (covalent) #status predicted

F:145-177/Disulfide bonds: #status predicted

Query Match	81.88;	Score 657.5;	DB 1;	Length 235;
Best Local Similarity	78.38;	Pred. No. 1,1e-60;		
Matches 123;	Conservative 20;	Mismatches 13;	Indels 1;	Gaps
Qy	1	VRSSRRTPSDPVAHVAVANPAEGQOLMLNRAVALLANGVELRDNOLVYPSSEGLYLYTS	60	
Db	80	LRSSSQNSDQPVAAHVAVANHQVEQLEWLSQRAVALLANGMDLKDNDLVYPAQSLYLYTS	139	
Qy	61	QVLRKGQCCPSTHVLHTHTISRIVASTQTKYNLLSAIKSPQQRETPGCAEAKPMXEPYIL	120	
Db	140	QVLEFGQCCPDP-VYLLHTPTVASRFATISYQEKNNLLSAVKSPPCKDTPGCAELKPMYEPYIL	198	
Qy	121	GGVFQLEKGRLSAEINRPDVLDAEASQGVYFGTIAL	157	
Db	199	GGVFQLEKGRDQLSAEVLNPKTLIDPAESQGYIFGYIAL	235	
RESULT	7			
	552715			

Query Match	81.13;	Score 652;	DB 1;	Length 233;
Best Local Similarity	80.33;	Pred. No. 3.9e-60;		
Matches 126;	Conservative 15;	Mismatches 16;	Indels 0;	Gaps
OY	1	VRSSRTSPDKPVAAHVANPQAEQOLMLNRAAALLANGCYELRDNDLVYPSSEGLIYIS	60	
		: : : : : : : : :		
Db	77	LRSSQASNNKPVAAHVADVINSQPLRMDSYANALANGKLELDNDLVYPADGLIYIS	136	
OY	61	QYLFEGGCCPSTHYLLTHTTISRIVAVSYOTKNLLSAIKSPQQRTPPGAEAKPMXEPYIL	120	
		: : : : : : : : :		
Db	137	QYLFEGGCCPSTHYLLTHTTISRIVAVSYOTKNLLSAIKSPCHRTTPMAEAKKPYEPIYO	186	


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Oy 121 GGVFQLEKGDRLSAEINRPDYLDFAESQGVYFGIATL 157
      |||||||
      Db 197 GGVFQLEKGDRLSAEINLPDYLDYAESQGVYFGIATL 233

RESULT 9
154490
tumor necrosis factor alpha precursor - white-footed mouse
C:Species: Peromyscus leucopus (white-footed mouse)
C:Date: 02-Aug-1996 #sequence_revision 02-Aug-1996 #text_change 04-Feb-2000
C:Accession: 154490
R:Crew, M.D.; Filipowsky, M.E.
Immunogenetics 35, 351-353, 1992
A:Title: Sequence of the tumor necrosis factor/cachectin (TNF) gene from Peromyscus leucopus
A:Reference number: 154490; MUID:92218012
A:Accession: 154490
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: DNA
A:Residues: 1-235 <RES>
A:Cross-references: GB:M59233; NID:g202506; PIDN:AAA40596.1; PID:g202507
C:Genetics:
A:Gene: PLNPF
A:Introns: 62/3; 81/1; 97/1
C:Superfamily: tumor necrosis factor
C:Keywords: glycoprotein; lipoprotein; myristylation
F:19/20/Binding site: myristate (Lys) (covalent) #status predicted
F:84/Binding site: carbohydrate (Ser) (covalent) #status predicted

Query Match 81.0%; Score 651.5; DB 2; Length 235;
Best Local Similarity 78.3%; Pred. No. 4,4e-60;
Matches 123; Conservative 20; Mismatches 13; Indels 1; Gaps 1;

Oy 1 VRSSSRTPSDKPVAVHVNPNQAEQGLQWLNRRANLLANGVELRDNLVPSSEGLYLYS 60
      |||||||
      Db 80 LRSSSQASNDKPVAVHVNPNQAEQGLQWLNRRANLLANGVELRDNLVPSSEGLYLYS 139

Oy 61 QVLFKGGCPSHTVLLTHTISRIANVSQTKVNLSSAIPCORETEGAEAPKWEPIYL 120
      |||||||
      Db 140 QVLFKGGC-SSYVLLHTTVSRFAVSIDKYNLLSAISPCPKETPEGSELKPMTEPIYL 198

Oy 121 GGVFQLEKGDRLSAEINRPDYLDFAESQGVYFGIATL 157
      |||||||
      Db 199 GGVFQLEKGDRLSAEINLPDYLDFAESQGVYFGIATL 235

RESULT 10
JH0529
tumor necrosis factor alpha precursor - sheep
N:Alternate names: cachectin; TNF alpha
C:Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C:Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 04-Feb-2000
C:Accession: JH0529; S48118; S13114; S20661
R:Green, I.R.; Sargan, D.R.
Gene 109, 203-210, 1991
A:Title: Sequence of the cDNA encoding ovine tumor necrosis factor-alpha: problems with
A:Reference number: JH0529; MUID:92112044
A:Accession: JH0529
A:Molecule type: mRNA
A:Residues: 1-234 <GRE>
A:Cross-references: EMBL:X55152; NID:g1405; PIDN:CAA38952.1; PID:g1406
R:Nash, A.D.; Barcham, G.J.; Brandon, M.R.; Andrews, A.E.
Immunol. Cell Biol. 69, 273-283, 1991
A:Title: Molecular cloning, expression and characterization of ovine TNF-alpha.
A:Reference number: S48118; MUID:9215784
A:Accession: S48118
A:Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-234 <NNS>
A:Cross-references: EMBL:X56756; NID:g297806; PIDN:CAA40076.1; PID:g297807
R:Young, A.J.; Hay, J.B.; Chan, J.Y.C.
Nucleic Acids Res. 18, 6723, 1990

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A:Title: Primary structure of ovine tumor necrosis factor alpha cDNA.
A:Reference number: S13114; MUID:91067496
A:Accession: S13114
A:Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-62,64-224 <Y0>
A:Cross-references: EMBL:X55966; NID:g1403; PIDN:CAA39437.1; PID:g1404
A>Note: comparison with the introns of homologous sequences suggest that this is prob
C:Superfamily: tumor necrosis factor
C:Keywords: alternative splicing; cytokine; cytotoxin; glycoprotein; lipoprotein; lym
F:1-77/Domains: propeptide #status predicted <PRO>
F:78-234/Product: tumor necrosis factor alpha #status predicted <TNF>
F:120/Binding site: myristate (Lys) (covalent) #status predicted
F:82/Binding site: carbohydrate (Ser) (covalent) #status predicted
F:96/Binding site: carbohydrate (Asn) (covalent) #status predicted
F:146-178/Disulfide bonds: #status predicted

Query Match 80.8%; Score 650; DB 1; Length 224;
Best Local Similarity 80.3%; Pred. No. 6,3e-60;
Matches 126; Conservative 15; Mismatches 16; Indels 0; Gaps 0;

Oy 1 VRSSSRTPSDKPVAVHVNPNQAEQGLQWLNRRANLLANGVELRDNLVPSSEGLYLYS 60
      |||||||
      Db 78 LRSSSQASNNKPVAVHVNPNQAEQGLQWLNRRANLLANGVELRDNLVPSSEGLYLYS 137

Oy 61 QVLFKGGCPSHTVLLTHTISRIANVSQTKVNLSSAIPCORETEGAEAPKWEPIYL 120
      |||||||
      Db 138 QVLFKGGCPSHTVLLTHTISRIANVSQTKVNLSSAIPCORETEGAEAPKWEPIYL 197

Oy 121 GGVFQLEKGDRLSAEINRPDYLDFAESQGVYFGIATL 157
      |||||||
      Db 198 GGVFQLEKGDRLSAEINLPDYLDFAESQGVYFGIATL 234

RESULT 11
S06192
tumor necrosis factor alpha precursor - goat (fragment)
N:Alternate names: cachectin; TNF alpha
C:Species: Capra aegagrus hircus (domestic goat)
C:Date: 28-Feb-1990 #sequence_revision 28-Feb-1990 #text_change 31-Jan-2000
C:Accession: S06192; S41867
R:Goldstein, I.M.; Henner, D.; Talhouk, A.
submitted to the EMBL data library, March 1989
A:Reference number: S06192
A:Accession: S06192
A:Molecule type: mRNA
A:Residues: 1-193 <GO>
A:Cross-references: EMBL:X14826; NID:g992; PIDN:CAA32937.1; PID:g993
R:Rimstad, E.
submitted to the EMBL data library, January 1994
A:Reference number: S41867
A:Accession: S41867
A:Molecule type: mRNA
A:Residues: 36-38, 'S', '40-78, 'A', '80-88, 'N', '90-114, 'O', '116-123, 'D', '125-144, 'G', '145-173,
A:Cross-references: EMBL:X77317; NID:g452607; PIDN:CAA4523.1; PID:g452608
C:Superfamily: tumor necrosis factor
C:Keywords: cytokine; cytotoxin; glycoprotein; lymphokine; macrophage; membrane prote
F:106-138/Disulfide bonds: #status predicted

Query Match 80.3%; Score 645.5; DB 2; Length 193;
Best Local Similarity 80.9%; Pred. No. 1.5e-59;
Matches 127; Conservative 14; Mismatches 15; Indels 1; Gaps 1;

Oy 1 VRSSSRTPSDKPVAVHVNPNQAEQGLQWLNRRANLLANGVELRDNLVPSSEGLYLYS 60
      |||||||
      Db 38 LRSSSQASNNKPVAVHVNPNQAEQGLQWLNRRANLLANGVELRDNLVPSSEGLYLYS 97

Oy 61 QVLFKGGCPSHTVLLTHTISRIANVSQTKVNLSSAIPCORETEGAEAPKWEPIYL 120
      |||||||

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Db 98 QVLEGRHCCPTPLFLHTHTISRIANVSQYTKVNLISAIKSPCHRETP-
 QY 121 GGVEFQLEKGRDLSAEINRPDYLDFAESGQYFGIATL 157
 157 GGVEFQLEKGRDLSAEINRPDYLDFAESGQYFGIATL 193

RESULT 12

tumor necrosis factor alpha precursor - rabbit

A:Accession: A25451

C:Species: Oryctolagus cuniculus (domestic rabbit)

C>Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 04-Feb-2000

C/Accession: A25454; A25451; J50727

R:Itô, H.; Yamamoto, S.; Kuroda, S.; Sakamoto, H.; Kajihara, J.; Kiyota, T.; Hayashi, H.

DNA 5, 149-156, 1986

A:Title: Molecular cloning and expression in Escherichia coli of the cDNA coding for rat

A:Reference number: A25454; MUID:86219711

A:Accession: A25454

A:Molecule type: mRNA

A:Residues: 1-234 <IT0>

A:Cross-references: GB:M12845; NID:g165759; PIDN:AAA31486.1; PID:g165760

R:Itô, H.; Shirai, T.; Yamamoto, S.; Akita, M.; Kawahara, S.; Todd, C.W.; Wallace, R.B.

DNA 5, 157-165, 1986

A:Title: Molecular cloning of the gene encoding rabbit tumor necrosis factor.

A:Reference number: A25451; MUID:86219712

A:Accession: A25451

A:Molecule type: DNA

A:Residues: 1-234 <IT2>

A>Note: this sequence differs from that shown in having a Gln inserted between residues

R:Shakhov, A.N.; Kuprash, D.V.; Azizov, M.M.; Jongeneel, C.V.; Nedospasov, S.A.

Gene 95, 215-221, 1990

A:Title: Structural analysis of the rabbit TNF locus, containing the genes encoding TNF-

A:Reference number: JH0309; MUID:91065534

A:Accession: J50727

A>Status: nucleic acid sequence not shown; translation not shown

A:Molecule type: DNA

A:Residues: 1-62, 'Q', 63-234 <SHA>

A:Cross-references: GB:M60340; GB:M35326; NID:g165754; PIDN:AAA31484.1; PID:g165756

C:Genetics:

A:Introns: 62/3; 80/1; 96/1

C:Superfamily: tumor necrosis factor

C:Keywords: cytokine; cytotoxin; glycoprotein; lipoprotein; lymphokine; macrophage; mem

F:1-81/Domain: propeptide #status predicted <PRO>

F:82-234/Product: tumor necrosis factor #status predicted <MAT>

F:19,20/Binding site: myristate (lys) (covalent) #status predicted

F:83/Binding site: carbohydrate (Ser) (covalent) #status predicted

F:147-178/Disulfide bonds: #status predicted

Query Match 80.0%; Score 643.5; DB 1; Length 234;
 Best Local Similarity 79.6%; Pred. No. 3e-59;
 Matches 125; Conservative 14; Mismatches 17; Indels 1; Gaps 1;

RESULT 13

tumor necrosis factor alpha precursor - rat

N:Alternate names: cachectin; TNF alpha

C:Species: Rattus norvegicus (Norway rat)

C>Date: 07-Jun-1990 #sequence_revision 07-Jun-1990 #text_change 04-Feb-2000

C:Accession: J00029; JN0868; S21674
 R:Shirai, T.; Shimizu, N.; Horiguchi, S.; Ito, H.
 Agric. Biol. Chem. 53, 1733-1736, 1989
 A:Title: Cloning and expression in Escherichia coli of the gene for rat tumor necrosi

A:Reference number: J00029

A:Accession: J00029

A:Molecule type: DNA

A:Residues: 1-235 <SH2>

R:Kwon, J.; Chung, I.Y.; Benveniste, E.N.

Gene 132, 227-236, 1993

A:Title: Cloning and sequence analysis of the rat tumor necrosis factor-encoding gene

A:Reference number: JN0868; MUID:94040766

A:Accession: JN0868

A:Molecule type: DNA

A:Residues: 1-235 <KMO>

A:Cross-references: GB:L00981; NID:g205253; PIDN:AAA16275.1; PID:g205254

R:Estler, H.C.; Grewe, M.; Gausling, R.; Pavlovic, M.; Decker, K.

Biol. Chem. Hoppe-Seyler 373, 271-281, 1992

A:Title: Rat tumor necrosis factor-alpha. Transcription in rat Kupffer cells and in v

A:Reference number: S21674; MUID:92329007

A:Accession: S21674

A:Molecule type: mRNA

A:Residues: 1-38, 'P', 40-162, 'T', 164-201, 'S', 203-235 <EST>

A:Cross-references: GB:X66539; GB:S40199; NID:g395369; PIDN:CAA47146.1; PID:g395370

C:Comment: Tumor necrosis factor is secreted by macrophages in response to endotoxin

C:Genetics:

A:Gene: TNF-alpha

A:Introns: 62/3; 81/1; 97/1

C:Superfamily: tumor necrosis factor

C:Keywords: cytokine; cytotoxin; glycoprotein; lipoprotein; lymphokine; macrophage; m

F:80-235/Product: tumor necrosis factor #status predicted <MAT>

F:19,20/Binding site: myristate (lys) (covalent) #status predicted

F:84/Binding site: carbohydrate (Ser) (covalent) #status predicted

F:86/Binding site: carbohydrate (Asn) (covalent) #status predicted

F:148-179/Disulfide bonds: #status predicted

Query Match 79.9%; Score 642.5; DB 2; Length 235;
 Best Local Similarity 77.7%; Pred. No. 3.8e-59;
 Matches 122; Conservative 19; Mismatches 15; Indels 1; Gaps 1;

QY 1 VRSSSRPSPDKPVAHVYANPQAEQOLQWLNRRANALLANGVELNDQLVVPSGILYLIYS 60
 :||||| :||||| :||||| :||||| :||||| :||||| :||||| :||||| :||||| :|||||
 Db 80 LRSSSQNSDPKPVAVHQAQEQLEWLSQRANALLANGMDLNDQLVVADGLYLIYS 139
 QY 61 QVLEKGGCCPTHVLLHTHTSRIVSVQTKVNLISAIKSPQKRETPGAEKPKMXPXYL 120
 :||||| :||||| :||||| :||||| :||||| :||||| :||||| :||||| :||||| :|||||
 Db 140 QVLEKGGCCPD-VYLLHTHTVSRAISYQEKVSLLSAIKSPCKDTPGAEKPKMXPXYL 198
 QY 121 GGVEFQLEKGRDLSAEINRPDYLDFAESGQYFGIATL 157
 :||||| :||||| :||||| :||||| :||||| :||||| :||||| :||||| :||||| :|||||
 Db 199 GGVEFQLEKGRDLSAEINRPDYLDFAESGQYFGIATL 235

RESULT 14

tumor necrosis factor beta precursor - rabbit

N:Alternate names: lymphotoxin; TNF beta

C:Species: Oryctolagus cuniculus (domestic rabbit)

C>Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999

C/Accession: JH0309; PNO098

R:Shakhov, A.N.; Kuprash, D.V.; Azizov, M.M.; Jongeneel, C.V.; Nedospasov, S.A.

Gene 95, 215-221, 1990

A:Title: Structural analysis of the rabbit TNF locus, containing the genes encoding T

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GenCore version 4.5
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OM protein - protein search, using sw model

Run on: August 30, 2002, 17:36:13 ; Search time 11.95 seconds
(without alignments)
508.700 Million cell updates/sec

Title: US-09-981-289a-20

Perfect score: 804
Sequence: 1 VRSSSRPSPDKPVAHVYANP.....RPDIYDFAESQGVYFGIIL 157

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 105224 seqs, 38719550 residues

Total number of hits satisfying chosen parameters: 105224

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Database : SwissProt_40.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	802	99.8	233	1	TNFA_HUMAN
2	795	98.9	233	1	TNFA_PAPSP
3	784	97.5	233	1	TNFA_MACMU
4	781	97.1	233	1	TNFA_MACFA
5	780	97.0	233	1	TNFA_PAPHU
6	761	94.7	233	1	TNFA_CANFA
7	728	90.5	233	1	TNFA_FELCA
8	720	89.6	234	1	TNFA_HORSE
9	698.5	86.9	232	1	TNFA_PIG
10	660.5	82.2	234	1	TNFA_CAVPO
11	657.5	81.8	235	1	TNFA_MOUSE
12	653	81.2	229	1	TNFA_CEREL
13	652	81.1	233	1	TNFA_BOVIN
14	651.5	81.0	235	1	TNFA_PERLE
15	650	80.8	234	1	TNFA_SHEEP
16	645.5	80.3	193	1	TNFA_CAPI
17	643.5	80.0	235	1	TNFA_RABIT
18	642.5	79.9	235	1	TNFA_RAT
19	627.5	78.0	233	1	TNFA_MARMO
20	595	74.0	233	1	TNFA_MACEU
21	442	55.0	233	1	TNFA_TRIUV
22	265.5	33.0	197	1	TNFB_RABIT
23	259.5	32.3	204	1	TNFB_BOVIN
24	254.5	31.7	204	1	TNFB_PIG
25	253	31.5	201	1	TNFB_MACEU
26	247	30.7	202	1	TNFB_RAT
27	244.5	30.4	202	1	TNFB_MOUSE
28	218.5	27.2	205	1	TNFB_HUMAN
29	175.5	21.8	278	1	FASL_HUMAN
30	173.5	21.6	279	1	FASL_MOUSE
31	168.5	21.0	240	1	TN14_HUMAN
32	162	20.1	244	1	TNFC_HUMAN
33	158	19.7	281	1	FASL_HUMAN

ALIGNMENTS

RESULT	1	STANDARD	PRT	233 AA.
TNFA_HUMAN				
ID	TNFA_HUMAN			
AC	P01375			
DT	21-JUL-1986 (Rel. 01, Created)			
DT	21-JUL-1986 (Rel. 01, Last sequence update)			
DT	01-MAR-2002 (Rel. 41, Last annotation update)			
DE	Tumor necrosis factor precursor (TNF-alpha) (Cachectin).			
GN	TNF OR TNFA.			
OS	Homo sapiens (Human).			
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;			
OC	Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.			
OX	NCBI_Taxid=9606;			
RN	[1]			
RP	SEQUENCE FROM N.A.			
RX	MEDLINE=67217060; PubMed=3555974;			
RA	Nedospasov S.A., Shakhov A.N., Turetskaya R.L., Mett V.A.,			
RA	Aizov M.M., Georgiev G.P., Korobko V.G., Dobrynin V.N.,			
RA	Filippov S.A., Bystron N.S., Boldyreva E.F., Chuvpilo S.A.,			
RA	Chumakov A.M., Shingarova L.N., Ovchinnikov Y.A.;			
RT	"Random arrangement of genes coding for tumor necrosis factor (TNF-alpha) and lymphotoxin (TNF-beta) in the human genome.";			
RT	Cold Spring Harb. Symp. Quant. Biol. 51:611-624(1986).			
RL	[2]			
RP	SEQUENCE FROM N.A.			
RX	MEDLINE=65137896; PubMed=3883195;			
RA	Shirai T., Yamaguchi H., Ito H., Todd C.W., Wallace R.B.;			
RT	"Cloning and expression in Escherichia coli of the gene for human tumor necrosis factor.";			
RT	Nature 313:803-806(1985).			
RL	[4]			
RP	SEQUENCE FROM N.A.			
RX	MEDLINE=66016093; PubMed=2995927;			
RA	Nedwin G.E., Naylor S.L., Sakaguchi A.Y., Smith D.H.;			
RA	Jarrett-Nedwin J., Pennica D., Goeddel D.V., Gray P.W.;			
RT	"Human lymphotoxin and tumor necrosis factor genes: structure, homology and chromosomal localization.";			
RT	Nucleic Acids Res. 13:6361-6373(1985).			
RL	[5]			
RP	SEQUENCE FROM N.A.			
RX	MEDLINE=85142190; PubMed=3856324;			
RA	Wang A.M., Creasey A.A., Lader M.B., Lin L.S., Strickler J.,			
RA	van Arsdale J.N., Yamamoto R., Mark D.F.;			
RT	"Molecular cloning of the complementary DNA for human tumor necrosis factor.";			
RT	Science 228:149-154(1985).			
RL	[6]			
RP	SEQUENCE FROM N.A.			

34	132.5	16.5	291	1	TN10_MOUSE	P50592	mus	musculu
35	132	16.4	306	1	TNFC_MOUSE	P41155	mus	musculu
36	130	16.2	317	1	TN11_HUMAN	O14788	h	tumor nec
37	129	16.0	316	1	TN11_MOUSE	O35235	m	tumor nec
38	125	15.5	260	1	TNFS_MOUSE	P27348	mus	musculu
39	121	15.0	261	1	TNFS_HUMAN	P29965	homo	sapien
40	118	14.7	260	1	TNFS_FELCA	O97605	felis	silve
41	117	14.6	260	1	TNFS_CANFA	O97626	canis	famil
42	117	14.6	261	1	TNFS_BOVIN	P51749	bos	taurus
43	116.5	14.5	281	1	TN10_HUMAN	P50591	homo	sapien
44	98.5	12.3	309	1	T13B_MOUSE	O9wu72	mus	musculu
45	95.5	11.9	250	1	TN13_HUMAN	O75888	homo	sapien

RX MEDLINE-86030296; PubMed-3932069;
RA Marnefont A., Ersanen L., Tavernier J., van der Heyden J., Tizard R.,
RA Kawashima E., Shaw A., Johnson M.J., Semon D., Mueller R.,
RA Ruyschaert W.R., van Vliet A., Fiers W.;
RT "Molecular cloning and expression of human tumor necrosis factor and
RT comparison with mouse tumor necrosis factor.";
RL Eur. J. Biochem. 152:515-522(1985).
RN [7]
RP SEQUENCE FROM N.A.
RX MEDLINE-93272029; PubMed-8499947;
RA Iris F.J.M., Bouglelelet L., Prieur S., Caterina D., Primes G.,
RA Perrot V., Jurka J., Rodriguez-Tome P., Claverie J.-M., Dausset J.,
RA Cohen D.;
RT "Dense Alu clustering and a potential new member of the NF kappa B
RT family within a 90 kilobase HLA class III segment.";
RL Nat. Genet. 3:137-145(1993).
RN [8]
RP SEQUENCE FROM N.A.
RA Rowen L., Madan A., Qin S., Shaffer T., James R., Ratcliffe A.,
RA Abbsel N., Dichhoff R., Loretz C., Madan A., Dors M., Young J.,
RA Lasky S., Hood L.;
RT "Sequence of the human major histocompatibility complex class III
RT region.";
RT Submitted (OCT-1999) to the EMBL/GenBank/DBJ databases.
RN [9]
RP SEQUENCE FROM N.A.
RA Shih S., Tamliya G., Oka A., Inoko H.;
RT Homo sapiens 2'229,817bp genomic DNA of 6p21.3 HLA class I region.";
RL Submitted (SEP-1999) to the EMBL/GenBank/DBJ databases.
RN [10]
RP X-RAY CRYSTALLOGRAPHY (2.9 ANGSTROMS).
RX MEDLINE-89159409; PubMed-2922050;
RA Jones E.Y., Stuart D.I., Walker N.P.;
RT "Structure of tumour necrosis factor.";
RL Nature 338:225-228(1989).
RN [11]
RP X-RAY CRYSTALLOGRAPHY (2.9 ANGSTROMS).
RX MEDLINE-91193276; PubMed-1964681;
RA Jones E.Y., Stuart D.I., Walker N.P.;
RT "The structure of tumour necrosis factor -- implications for
RT biological function.";
RL J. Cell Sci. Suppl. 13:11-18(1990).
RN [12]
RP X-RAY CRYSTALLOGRAPHY (2.6 ANGSTROMS).
RX MEDLINE-90008932; PubMed-2551905;
RA Eck M.J., Sprang S.R.;
RT "The structure of tumor necrosis factor-alpha at 2.6-A resolution.
RT Implications for receptor binding.";
RL J. Biol. Chem. 264:17595-17605(1989).
RN [13]
RP X-RAY CRYSTALLOGRAPHY (2.3 ANGSTROMS) OF MUTANT ARG-107.
RX MEDLINE-98147459; PubMed-9488135;
RA Reed C., Fu Z.Q., Wu J., Xue Y.N., Harrison R.W., Chen M.J.,
RA Weber I.T.;
RT "Crystal structure of TNF-alpha mutant R31D with greater affinity for
RT receptor R1 compared with R2.";
RL Protein Eng. 10:1101-1107(1997).
RN [14]
RP X-RAY CRYSTALLOGRAPHY (1.8 ANGSTROMS) OF MUTANT M3S.
RX MEDLINE-98113178; PubMed-9442056;
RA Cha S.S., Kim J.S., Cho H.S., Shin N.K., Jeong W., Shin H.C.,
RA Kim Y.U., Hahn J.H., Oh B.H.;
RT "High resolution crystal structure of a human tumor necrosis factor-
RT alpha mutant with low systemic toxicity.";
RL J. Biol. Chem. 273:2153-2160(1998).
RN [15]
RP MUTAGENESIS.
RX MEDLINE-91184128; PubMed-2009860;
RA Ostade X.V., Tavernier J., Prange T., Fiers W.;
RT "Localization of the active site of human tumor necrosis factor
RT (hTNF) by mutational analysis.";
RL EMBO J. 10:827-836(1991).
RN [16]

RP MYRISTOYLATION.
RX MEDLINE-93018820; PubMed-1402651;
RA Stevenson F.T., Bursten S.L., Locksley R.M., Lovett D.H.;
RT "Myristyl acylation of the tumor necrosis factor alpha precursor on
RT specific lysine residues.";
RL J. Exp. Med. 176:1053-1062(1992).
CC -1- FUNCTION: TNF IS MAINLY SECRETED BY MACROPHAGES, IT IS A CYTOKINE
CC WITH A WIDE VARIETY OF FUNCTIONS: IT CAN CAUSE CYTOLYSIS OF
CC CERTAIN TUMOR CELL LINES, IT IS IMPLICATED IN THE INDUCTION OF
CC CACHEXIA, IT IS A POTENT PYROGEN CAUSING FEVER BY DIRECT ACTION
CC OR BY STIMULATION OF INTERLEUKIN 1 SECRETION, IT CAN STIMULATE
CC CELL PROLIFERATION AND INDUCE CELL DIFFERENTIATION UNDER CERTAIN
CC CONDITIONS.
CC -1- SUBUNIT: HOMODIMER.
CC -1- SUBCELLULAR LOCATION: TYPE II MEMBRANE PROTEIN. ALSO EXISTS AS AN
CC EXTRACELLULAR SOLUBLE FORM.
CC -1- PTM: THE SOLUBLE FORM DERIVES FROM THE MEMBRANE FORM BY
CC PROTEOLYTIC PROCESSING.
CC -1- DISEASE: CACHEXIA ACCOMPANIES A VARIETY OF DISEASES, INCLUDING
CC CANCER AND INFECTION, AND IS CHARACTERIZED BY GENERAL ILL HEALTH
CC AND MALNUTRITION.
CC -1- SIMILARITY: BELONGS TO THE TUMOR NECROSIS FACTOR FAMILY.
CC -----
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CC or send an email to license@sib-sib.ch).
CC -----
DR EMBL; X02910; CAA26669.1; -
DR EMBL; M16441; AAA61200.1; -
DR EMBL; X01394; CAA25650.1; -
DR EMBL; M10988; AAA61198.1; -
DR EMBL; M26311; AAA36758.1; -
DR EMBL; Z15026; CAA78745.1; -
DR EMBL; AF129756; AAD18091.1; -
DR EMBL; AF000505; BAB63396.1; -
DR PIR; B23784; OMHUN.
DR PIR; A44189; A44189.
DR PIR; S36153; S36153.
DR PDB; 1TNE; 15-JAN-91.
DR PDB; 2TUN; 31-JAN-94.
DR PDB; 1A8M; 17-JUN-98.
DR PDB; 4TSV; 02-MAR-99.
DR PDB; 5TSW; 07-MAY-99.
DR Glycosultedb; P01375; -.
DR MIM; 191160; -.
DR InterPro; IPR003636; TNF_abcd.
DR InterPro; IPR000478; TNF_family.
DR Pfam; PF00229; TNF; 1.
DR PRINTS; PR01234; TNCRGOSISFCT.
DR PRODOM; PD002012; TNF_abcd; 1.
DR SMART; SM00207; TNF; 1.
DR PROSITE; PS00251; TNF_1; 1.
DR PROSITE; PS50049; TNF_2; 1.
KW Cytokine; Cytotoxin; Transmembrane; Glycoprotein; Signal-anchor;
KW Myristate; 3d-structure; Polymorphism.
FT PROPEP 1 76
FT CHAIN 77 233
FT TRANSMEM 36 56
FT LIPID 19 19
FT LIPID 20 20
FT DISULFID 145 177
FT VARIANT 94 94
FT MUTAGEN 105 105
FT MUTAGEN 108 108
FT MUTAGEN 112 112
FT MUTAGEN 160 160
FT MUTAGEN 162 162
FT MUTAGEN 167 167
A -> T (IN DBSNP:1800620).
/FTID-VAR_011927.
L->S: LOW ACTIVITY.
R->W: BIOLOGICALLY INACTIVE.
L->F: BIOLOGICALLY INACTIVE.
A->V: BIOLOGICALLY INACTIVE.
S->F: BIOLOGICALLY INACTIVE.
V->A,D: BIOLOGICALLY INACTIVE.

Query Match 99.8%; Score 802; DB 1; Length 233;
Best Local Similarity 99.4%; Pred. No. 6,3e-78;
Matches 156; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 VRSSSRTPSDKPVAAHVYVAVPAQEGQLQMLNRRANALLANGVELNDQLVPSSEGLYLIS 60
DB 77 VRSSSRTPSDKPVAAHVYVAVPAQEGQLQMLNRRANALLANGVELNDQLVPSSEGLYLIS 136
QY 61 QVLEKGGCSTHVLHTHTISRIAVSYOTKVNLLSAIKSPCQRETPGCAEAKPMXEPIYL 120
DB 137 QVLEKGGCSTHVLHTHTISRIAVSYOTKVNLLSAIKSPCQRETPGCAEAKPMXEPIYL 196
QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQYFGIALL 157
DB 197 GGVFQLEKGDRLSAEINRPDYLDFAESGQYFGIALL 233

RESULT 2
TNFA_PAPSP STANDARD; PRT; 233 AA.
AC P33620;
DT 01-FEB-1994 (Rel. 28, Created)
DT 01-FEB-1994 (Rel. 28, Last sequence update)
DT 15-JUL-1999 (Rel. 38, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Cachectin).
GN TNF OR TNFA.
OS Papio sp. (Baboon).
OC Eukaryota; Metazoa; Chordata; Cranialata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Cercopithecoidea;
OC Cercopithecinae; Papio.
OX NCBI_Taxid=61183;
RN [1]
RP SEQUENCE FROM N.A.
RA Sanjanwala M., Edwards A.;
RL Submitted (SEP-1991) to the EMBL/Genbank/DBJ databases.
CC -1- FUNCTION: TNF IS MAINLY SECRETED BY MACROPHAGES. IT IS A CYTOKINE
WITH A WIDE VARIETY OF FUNCTIONS: IT CAN CAUSE CYTOLYSIS OF
CERTAIN TUMOR CELL LINES. IT IS IMPLICATED IN THE INDUCTION OF
CACHEXIA. IT IS A POTENT PYROGEN CAUSING FEVER BY DIRECT ACTION
OR BY STIMULATION OF INTERLEUKIN 1 SECRETION. IT CAN STIMULATE
CELL PROLIFERATION AND INDUCE CELL DIFFERENTIATION UNDER CERTAIN
CONDITIONS.
CC -1- SUBUNIT: HOMOTRIMER.
CC -1- SUBCELLULAR LOCATION: TYPE II MEMBRANE PROTEIN. ALSO EXISTS AS AN
EXTRACELLULAR SOLUBLE FORM.
CC -1- PTM: THE SOLUBLE FORM DERIVES FROM THE MEMBRANE FORM BY
PROTEOLYTIC PROCESSING.
CC -1- SIMILARITY: BELONGS TO THE TUMOR NECROSIS FACTOR FAMILY.
CC -----
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or send an email to license@isb.slb.ch).
CC -----
DR EMBL: X62141; CAA44068.1; -.
DR PIR: S22052; S22052.
DR HSSP: P01375; 4TSV.
DR InterPro: IPR003636; TNF_abc.
DR InterPro: IPR000478; TNF_family.
DR Pfam: PF00229; TNF.1.
DR PRINTS: PR01234; TNECROSISFCT.
DR PRODOM: PD002012; TNF_abc.1.
DR SMART: SM00207; TNF.1.
DR PROSITE: PS00251; TNF.1; 1.
DR PROSITE: PS50049; TNF_2; 1.
KW Cytokine; Cytotoxin; Transmembrane; Glycoprotein; Signal-anchor;
KW Myelastate.
KW PROPEP 1 76 BY SIMILARITY.
FT CHAIN 77 233 TUMOR NECROSIS FACTOR.

FT TRANSMEM 36 56 SIGNAL-ANCHOR (TYPE-II MEMBRANE PROTEIN).
FT LIPID 19 19 MYRISTATE (BY SIMILARITY).
FT LIPID 20 20 MYRISTATE (BY SIMILARITY).
FT DISULFID 145 177 BY SIMILARITY.
SQ SEQUENCE 233 AA; 25557 MW; 45360B48DC74173 CRC64;

Query Match 98.9%; Score 795; DB 1; Length 233;
Best Local Similarity 98.7%; Pred. No. 3,5e-77;
Matches 155; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 VRSSSRTPSDKPVAAHVYVAVPAQEGQLQMLNRRANALLANGVELNDQLVPSSEGLYLIS 60
DB 77 VRSSSRTPSDKPVAAHVYVAVPAQEGQLQMLNRRANALLANGVELNDQLVPSSEGLYLIS 136
QY 61 QVLEKGGCSTHVLHTHTISRIAVSYOTKVNLLSAIKSPCQRETPGCAEAKPMXEPIYL 120
DB 137 QVLEKGGCSTHVLHTHTISRIAVSYOTKVNLLSAIKSPCQRETPGCAEAKPMXEPIYL 196
QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQYFGIALL 157
DB 197 GGVFQLEKGDRLSAEINRPDYLDFAESGQYFGIALL 233

RESULT 3
TNFA_MACMU STANDARD; PRT; 233 AA.
AC P48094;
DT 01-FEB-1996 (Rel. 33, Created)
DT 01-FEB-1996 (Rel. 33, Last sequence update)
DT 15-JUL-1999 (Rel. 38, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Cachectin).
GN TNF OR TNFA.
OS Macaca mulatta (Rhesus macaque).
OC Eukaryota; Metazoa; Chordata; Cranialata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Cercopithecoidea;
OC Cercopithecinae; Macaca.
OX NCBI_Taxid=9544;
RN [1]
RP SEQUENCE FROM N.A.
RA MEDLINE=96003435; Pubmed=7561102;
RA Villinger F.J., Brar S.S., Mayne A.E., Chikala N., Ansari A.A.;
RT "Comparative sequence analysis of cytokine genes from human and
nonhuman primates";
RL J. Immunol. 155:3946-3954(1995).
CC -1- FUNCTION: TNF IS MAINLY SECRETED BY MACROPHAGES. IT IS A CYTOKINE
WITH A WIDE VARIETY OF FUNCTIONS: IT CAN CAUSE CYTOLYSIS OF
CERTAIN TUMOR CELL LINES. IT IS IMPLICATED IN THE INDUCTION OF
CACHEXIA. IT IS A POTENT PYROGEN CAUSING FEVER BY DIRECT ACTION
OR BY STIMULATION OF INTERLEUKIN 1 SECRETION. IT CAN STIMULATE
CELL PROLIFERATION AND INDUCE CELL DIFFERENTIATION UNDER CERTAIN
CONDITIONS.
CC -1- SUBUNIT: HOMOTRIMER.
CC -1- SUBCELLULAR LOCATION: TYPE II MEMBRANE PROTEIN. ALSO EXISTS AS AN
EXTRACELLULAR SOLUBLE FORM.
CC -1- PTM: THE SOLUBLE FORM DERIVES FROM THE MEMBRANE FORM BY
PROTEOLYTIC PROCESSING.
CC -1- DISEASE: CACHEXIA ACCOMPANIES A VARIETY OF DISEASES, INCLUDING
CANCER AND INFECTION, AND IS CHARACTERIZED BY GENERAL ILL HEALTH
AND MALNUTRITION.
CC -1- SIMILARITY: BELONGS TO THE TUMOR NECROSIS FACTOR FAMILY.
CC -----
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CC -----
DR EMBL: U19850; AAA86712.1; -.
DR HSSP: P01375; 4TSV.
DR InterPro: IPR003636; TNF_abc.

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DR InterPro: IPR000478; TNF_family.
DR Pfam: PF00229; TNF_1.
DR PRINTS: PR01234; TNECROSISFCR.
DR ProDom: PD002012; TNF_abc; 1.
DR SMART: SM00207; TNF_1.
DR PROSITE: PS00251; TNF_1; 1.
DR Pfam: PF00229; TNF_1.
DR Cytokine: Cytotoxin; Transmembrane; glycoprotein; signal-anchor.
FT PROPEP 1 76
FT CHAIN 77 233
FT TRANSMEM 36 56
FT DISULFID 145 177
SQ SEQUENCE 233 AA; 25630 MW; 9F6F850595F5D59 CRC64;

Query Match
Best Local Similarity 97.5%; Score 784; DB 1; Length 233;
Matches 133; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

QY 1 VRSSSRTPSDKPAHVAVANPQAEGLQWLNRRANALLANGVELDNLVYPSEGLYLIYS 60
DB 77 VRSSSRTPSDKPAHVAVANPQAEGLQWLNRRANALLANGVELDNLVYPSEGLYLIYS 136
QY 61 QVLFKGGCGSTHYVLLHTTISRIVSYQTVNLLSAIKSCQRTPGCAKPKXEPYIYL 120
DB 137 QVLFKGGCGSTHYVLLHTTISRIVSYQTVNLLSAIKSCQRTPGCAKPKXEPYIYL 196
QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGOVYFGIIL 157
DB 197 GGVFQLEKGDRLSAEINRPDYLDFAESGOVYFGIIL 233

RESULT 4
TNFA_MACFA
ID TNFA_MACFA STANDARD; PRT; 233 AA.
AC P79337;
DT 15-JUL-1998 (Rel. 36, Created)
DT 15-JUL-1998 (Rel. 36, Last sequence update)
DT 15-JUL-1999 (Rel. 38, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Cachectin).
GN TNF OR TNFA.
OS Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).
OC Eukaryota; Metazoa; Chordata; Craniala; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Cercopitheidae;
OC Cercopitheciae; Macaca.
OX NCBI_TaxID=9541;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-Lymphocytes;
RA Tsubumi M.;
RL Submitted (JAN-1997) to the EMBL/GenBank/DBJ databases.
CC -1- FUNCTION: TNF IS MAINLY SECRETED BY MACROPHAGES. IT IS A CYTOKINE
WITH A WIDE VARIETY OF FUNCTIONS: IT CAN CAUSE CYTOLYSIS OF
CERTAIN TUMOR CELL LINES. IT IS IMPLICATED IN THE INDUCTION OF
CACHEXIA, IT IS A POTENT PYROGEN CAUSING FEVER BY DIRECT ACTION
OR BY STIMULATION OF INTERLEUKIN 1 SECRETION. IT CAN STIMULATE
CELL PROLIFERATION AND INDUCE CELL DIFFERENTIATION UNDER CERTAIN
CONDITIONS.
CC -1- SUBUNIT: HOMOTRIMER.
CC -1- SUBCELLULAR LOCATION: TYPE II MEMBRANE PROTEIN. ALSO EXISTS AS AN
EXTRACELLULAR SOLUBLE FORM.
CC -1- PTM: THE SOLUBLE FORM DERIVES FROM THE MEMBRANE FORM BY
PROTEOLYTIC PROCESSING.
CC -1- DISEASE: CACHEXIA ACCOMPANIES A VARIETY OF DISEASES, INCLUDING
CANCER AND INFECTION, AND IS CHARACTERIZED BY GENERAL ILL HEALTH
AND MALNUTRITION.
CC -1- SIMILARITY: BELONGS TO THE TUMOR NECROSIS FACTOR FAMILY.
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CC -----
DR EMBL: AB000513; BAA19131.1; -.
DR HSPB: P01375; 4TSV.
DR InterPro: IPR003636; TNF_abc.
DR InterPro: IPR000478; TNF_family.
DR Pfam: PF00229; TNF_1.
DR PRINTS: PR01234; TNECROSISFCR.
DR ProDom: PD002012; TNF_abc; 1.
DR SMART: SM00207; TNF_1.
DR PROSITE: PS00251; TNF_1; 1.
DR PROSITE: PS0049; TNF_2; 1.
DR Cytokine: Cytotoxin; Transmembrane; glycoprotein; signal-anchor.
FT PROPEP 1 76
FT CHAIN 77 233
FT TRANSMEM 36 56
FT DISULFID 145 177
SQ SEQUENCE 233 AA; 25558 MW; 6ABF2C3AB132C217 CRC64;

Query Match
Best Local Similarity 97.1%; Score 781; DB 1; Length 233;
Matches 152; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY 1 VRSSSRTPSDKPAHVAVANPQAEGLQWLNRRANALLANGVELDNLVYPSEGLYLIYS 60
DB 77 VRSSSRTPSDKPAHVAVANPQAEGLQWLNRRANALLANGVELDNLVYPSEGLYLIYS 136
QY 61 QVLFKGGCGSTHYVLLHTTISRIVSYQTVNLLSAIKSCQRTPGCAKPKXEPYIYL 120
DB 137 QVLFKGGCGSTHYVLLHTTISRIVSYQTVNLLSAIKSCQRTPGCAKPKXEPYIYL 196
QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGOVYFGIIL 157
DB 197 GGVFQLEKGDRLSAEINRPDYLDFAESGOVYFGIIL 233

RESULT 5
TNFA_PAPHU
ID TNFA_PAPHU STANDARD; PRT; 233 AA.
AC Q77510;
DT 15-DEC-1998 (Rel. 37, Created)
DT 15-DEC-1998 (Rel. 37, Last sequence update)
DT 15-JUL-1999 (Rel. 38, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Cachectin).
GN TNF OR TNFA.
OS Papio hamadryas ursinus (Chacma baboon).
OC Eukaryota; Metazoa; Chordata; Craniala; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Cercopitheidae;
OC Cercopitheciae; Papio.
OX NCBI_TaxID=36229;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=98147379; PubMed=9488055;
RA Haudek S.B., Redl H., Schlögl G., Grolz B.P.;
RT "Complementary DNA (cDNA) sequence of baboon tumor necrosis factor
alpha."
RL Mol. Immunol. 34:1041-1042(1997).
CC -1- FUNCTION: TNF IS MAINLY SECRETED BY MACROPHAGES. IT IS A CYTOKINE
WITH A WIDE VARIETY OF FUNCTIONS: IT CAN CAUSE CYTOLYSIS OF
CERTAIN TUMOR CELL LINES. IT IS IMPLICATED IN THE INDUCTION OF
CACHEXIA, IT IS A POTENT PYROGEN CAUSING FEVER BY DIRECT ACTION
OR BY STIMULATION OF INTERLEUKIN 1 SECRETION. IT CAN STIMULATE
CELL PROLIFERATION AND INDUCE CELL DIFFERENTIATION UNDER CERTAIN
CONDITIONS.
CC -1- SUBUNIT: HOMOTRIMER.
CC -1- SUBCELLULAR LOCATION: TYPE II MEMBRANE PROTEIN. ALSO EXISTS AS AN
EXTRACELLULAR SOLUBLE FORM.
CC -1- PTM: THE SOLUBLE FORM DERIVES FROM THE MEMBRANE FORM BY
PROTEOLYTIC PROCESSING.
CC -1- DISEASE: CACHEXIA ACCOMPANIES A VARIETY OF DISEASES, INCLUDING
CANCER AND INFECTION, AND IS CHARACTERIZED BY GENERAL ILL HEALTH

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CC      AND MALNUTRITION.
CC      -1- SIMILARITY: BELONGS TO THE TUMOR NECROSIS FACTOR FAMILY.
CC      -----
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CC      entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC      or send an email to license@isb-sib.ch).
CC      -----
DR      EMBL; AF01963; AAC31675.1; -.
DR      HSSP; P01375; ATSV.
DR      InterPro: IPR003636; TNF_abc.
DR      InterPro: IPR000478; TNF_family.
DR      Pfam; PF00229; TNF; 1.
DR      PRINTS; PR01234; TNECROSISFCT.
DR      PRODOM; PD002012; TNF_abc; 1.
DR      SMART; SM00207; TNF_1; 1.
DR      PROSITE; PS00251; TNF_1; 1.
DR      PROSITE; PS50049; TNF_2; 1.
KW      Cytokine; Cytotoxin; Transmembrane; Glycoprotein; Signal-anchor.
FT      PROPEP 1 76
FT      CHAIN 77 233
FT      TRANSMEM 36 56
FT      DISULFID 145 177
SQ      SEQUENCE 233 AA; 25658 MW; B9403255058D4A03 CRC64;

Query Match          97.0%; Score 780; DB 1; Length 233;
Best Local Similarity 96.8%; Pred. No. 1.4e-75;
Matches 152; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRRTPSDKPVAVHVNPAQEGQLWLNRRANLLANGVELRDNLVPSSEGLYLIS 60
    ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
DB 77 VRSSRRTPSDKPVAVHVNPAQEGQLWLNRRANLLANGVELRDNLVPSSEGLYLIS 136
    ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
QY 61 QVLFKGGCPSPTHVLLHTTISRIVSYOTKYNLSAISKPCORETPEGAEPKWPTEPYL 120
    ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
DB 137 QVLFKGGCPSPTHVLLHTTISRIVSYOTKYNLSAISKPCORETPEGAEPKWPTEPYL 196
    ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
QY 121 GGVFQLEKGRDLSAEINRPDYLDFAESQGYFGIALL 157
    ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
DB 197 GGVFQLEKGRDLSAEINRPDYLDFAESQGYFGIALL 233
    ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||

RESULT 6
ID      TNFA_CANFA STANDARD; PRT; 233 AA.
AC      P51742; Q28339;
DT      01-OCT-1996 (Rel. 34, Created)
DT      01-OCT-1996 (Rel. 34, Last sequence update)
DT      15-JUL-1999 (Rel. 38, Last annotation update)
DE      Tumor necrosis factor precursor (TNF-alpha) (cachectin).
GN      TNF OR TNFA.
OS      Canis familiaris (Dog).
OC      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC      Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
OX      NCBI_TaxID=9615;
RN      [1]
RP      SEQUENCE FROM N.A.
RA      Fiers W., Beernart M.;
RL      Submitted (JAN-1996) to the EMBL/GenBank/DBJ databases.
RP      [2]
RP      SEQUENCE FROM N.A.
RA      Zucker K., Lu P., Fuller L., Asthana D., Esquenazi V., Miller J.;
RT      "Cloning and expression of the cDNA for canine tumor necrosis
RT      factor-alpha in E. coli.";
RL      Lymphokine Res. 13:191-196(1994).
RN      [3]
RP      SEQUENCE OF 74-205 FROM N.A.
RA      STRAIN-BEAGLE; TISSUE-Blood;
RA      Gilmore W.H., Carter S.D., Bennett M., Barnes A., Kelly D.F.;
```

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RL      Submitted (MAR-1996) to the EMBL/GenBank/DBJ databases.
CC      -1- FUNCTION: TNF IS MAINLY SECRETED BY MACROPHAGES. IT IS A CYTOKINE
CC      WITH A WIDE VARIETY OF FUNCTIONS. IT CAN CAUSE CYTOLYSIS OF
CC      CERTAIN TUMOR CELL LINES, IT IS IMPLICATED IN THE INDUCTION OF
CC      CACHEXIA, IT IS A POTENT PYROGEN CAUSING FEVER BY DIRECT ACTION
CC      OR BY STIMULATION OF INTERLEUKIN 1 SECRETION, IT CAN STIMULATE
CC      CELL PROLIFERATION AND INDUCE CELL DIFFERENTIATION UNDER CERTAIN
CC      CONDITIONS.
CC      -1- SUBUNIT: HOMOTRIMER (BY SIMILARITY).
CC      -1- SUBCELLULAR LOCATION: TYPE II MEMBRANE PROTEIN. ALSO EXISTS AS AN
CC      EXTRACELLULAR SOLUBLE FORM (BY SIMILARITY).
CC      -1- PTM: THE SOLUBLE FORM DERIVES FROM THE MEMBRANE FORM BY
CC      PROTEOLYTIC PROCESSING (BY SIMILARITY).
CC      -1- DISEASE: CACHEXIA ACCOMPANIES A VARIETY OF DISEASES, INCLUDING
CC      CANCER AND INFECTION, AND IS CHARACTERIZED BY GENERAL ILL HEALTH
CC      AND MALNUTRITION.
CC      -1- SIMILARITY: BELONGS TO THE TUMOR NECROSIS FACTOR FAMILY.
CC      -----
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CC      entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC      or send an email to license@isb-sib.ch).
CC      -----
DR      EMBL; X94932; CA64403.1; -.
DR      EMBL; S74068; AAB32391.1; -.
DR      EMBL; Z70046; CAA93908.1; -.
DR      HSSP; P01375; ATSV.
DR      InterPro: IPR003636; TNF_abc.
DR      InterPro: IPR000478; TNF_family.
DR      Pfam; PF00229; TNF; 1.
DR      PRINTS; PR01234; TNECROSISFCT.
DR      PRODOM; PD002012; TNF_abc; 1.
DR      SMART; SM00207; TNF_1; 1.
DR      PROSITE; PS00251; TNF_1; 1.
DR      PROSITE; PS50049; TNF_2; 1.
KW      Cytokine; Cytotoxin; Transmembrane; Glycoprotein; Signal-anchor.
FT      PROPEP 1 76
FT      CHAIN 77 233
FT      TRANSMEM 36 56
FT      DISULFID 145 177
FT      CONFLICT 59 60
FT      CONFLICT 66 66
FT      CONFLICT 74 74
FT      CONFLICT 111 111
FT      CONFLICT 116 116
FT      CONFLICT 134 135
SQ      SEQUENCE 233 AA; 25447 MW; 7B2588FBC8B25340 CRC64;

Query Match          94.7%; Score 761; DB 1; Length 233;
Best Local Similarity 93.0%; Pred. No. 1.4e-73;
Matches 146; Conservative 6; Mismatches 5; Indels 0; Gaps 0;

QY 1 VRSSRRTPSDKPVAVHVNPAQEGQLWLNRRANLLANGVELRDNLVPSSEGLYLIS 60
    ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
DB 77 VRSSRRTPSDKPVAVHVNPAQEGQLWLNRRANLLANGVELRDNLVPSSEGLYLIS 136
    ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
QY 61 QVLFKGGCPSPTHVLLHTTISRIVSYOTKYNLSAISKPCORETPEGAEPKWPTEPYL 120
    ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
DB 137 QVLFKGGCPSPTHVLLHTTISRIVSYOTKYNLSAISKPCORETPEGAEPKWPTEPYL 196
    ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
QY 121 GGVFQLEKGRDLSAEINRPDYLDFAESQGYFGIALL 157
    ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
DB 197 GGVFQLEKGRDLSAEINRPDYLDFAESQGYFGIALL 233
    ||||||| ||||||| ||||||| ||||||| ||||||| ||||||| |||||||

RESULT 7
ID      TNFA_FELCA STANDARD; PRT; 233 AA.
AC      P19101;
```

DT	01-NOV-1990 (Rel. 16, Created)
DT	01-NOV-1990 (Rel. 16, Last sequence update)
DT	15-JUL-1999 (Rel. 38, Last annotation update)
DE	Tumor necrosis factor precursor (TNF-alpha) (Cachectin).
GN	TNF OR TNFA.
OS	Felis silvestris catus (Cat).
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC	Mammalia; Eutheria; Carnivora; Fissipedia; Felidae; Felis.
OX	NCHI_Taxid:9685;
RN	[1]
RN	Nucleic Acids Res. 18:5563-5563(1990).
RN	[2]
RP	SEQUENCE FROM N.A.
RC	TISSUE=Blood;
RC	TISSUE=Bone marrow;
RA	Daniel S.L., Brenner C.A., Legendre A.M., Solomon A., Rouse B.T.;
RL	Submitted (XXX-1993) to the EMBL/Genbank/DBJ databases.
CC	-1- FUNCTION: TNF IS MAINLY SECRETED BY MACROPHAGES, IT IS A CYTOKINE WITH A WIDE VARIETY OF FUNCTIONS. IT CAN CAUSE CYTOLYSIS OF CERTAIN TUMOR CELL LINES, IT IS IMPLICATED IN THE INDUCTION OF CACHEXIA, IT IS A POTENT PYROGEN CAUSING FEVER BY DIRECT ACTION OR BY STIMULATION OF INTERLEUKIN 1 SECRETION, IT CAN STIMULATE CELL PROLIFERATION AND INDUCE CELL DIFFERENTIATION UNDER CERTAIN CONDITIONS.
CC	-1- SUBUNIT: HOMOTRIMER.
CC	-1- SUBCELLULAR LOCATION: TYPE II MEMBRANE PROTEIN, ALSO EXISTS AS AN EXTRACELLULAR SOLUBLE FORM.
CC	-1- PMW: THE SOLUBLE FORM DERIVES FROM THE MEMBRANE FORM BY PROTEOLYTIC PROCESSING.
CC	-1- DISEASE: CACHEXIA ACCOMPANIES A VARIETY OF DISEASES, INCLUDING CANCER AND INFECTION, AND IS CHARACTERIZED BY GENERAL ILL HEALTH AND MALNUTRITION.
CC	-1- SIMILARITY: BELONGS TO THE TUMOR NECROSIS FACTOR FAMILY.
CC	-----
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CC	or send an email to license@isb-sib.ch).
CC	-----
DR	EMBL; X54000; AAA37948.1; -.
DR	EMBL; M92061; AAA30818.1; -.
DR	PIR; S1688; S1688.
DR	HSP; P01375; ATSV.
DR	InterPro; IPR003636; TNF_abc.
DR	InterPro; IPR000478; TNF_Family.
DR	Pfam; PF00229; TNF; 1.
DR	PRINTS; PR01234; TNFNECROSISCT.
DR	ProDom; PD002012; TNF_abc; 1.
DR	SMART; SM00207; TNF; 1.
DR	PROSITE; PS00251; TNF_1; 1.
DR	PROSITE; PS50049; TNF_2; 1.
FM	Cytokine; Cytokln; Transmembrane; Glycoprotein; Signal-anchor. PROPEP
FT	CHAIN 1 76
FT	TRANSERM 77 233
FT	DISULFID 36 56
FT	CONFLICT 145 177
FT	CONFLICT 28 104
FT	CONFLICT 104 104
FT	CONFLICT 151 151
FT	CONFLICT 155 155
FT	CONFLICT 210 210
FT	CONFLICT 210 210
SO	SEQUENCE 233 AA; 25322 MW; 434D339567862506 CRC64;
Query Match	90.5%; Score 728; DB 1; Length 233;
Best Local Similarity	91.1%; Pred. No. 4.6e-70;

	MATCHES	143	Conservative	4	Mismatches	10	Indels	0	Gaps	0
QY	1	VRSSRTSPSDKPRVAVVANPQAEGSOLWLNRRANALLNGVLRNQLVPSEGLIYLIS	60							
Db	77	LRSSTRTSPSDKPRVAVVANPQAEGSLQRLSRRAALLANGVELTNOLKVPDSGLIYLIS	136							
QY	61	OVLFGGQCPSRHYLLTFTISRIVSYOTKVLLSAIKSPCOREPEGAEPKMEPIYL	120							
Db	137	OVLFTGGCCPSRHYLLTHTAISRFANSYTQTKVLLSAIKSPCOREPEGAEPKMEPIYL	196							
QY	121	GVFPLEKGDRLSAEINRPDYLDFAESGQVYFGIAL	157							
Db	197	GVFPLEKGDRILSTEINLPAYLDFAESGQVYFGIAL	233							
RESULT	8									
TNFA_HORSE										
ID	TNFA_HORSE	STANDARD;	PRT;	234	AA.					
AC	P29553:									
DT	01-APR-1993 (Rel. 25, Created)									
DT	01-APR-1993 (Rel. 25, Last sequence update)									
DT	15-JUL-1999 (Rel. 38, Last annotation update)									
DE	Tumor necrosis factor precursor (TNF-alpha) (cachectin).									
CN	TNF OR TNFA.									
OS	Equis caballus (Horse).									
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;									
RA	Mammalia; Eutheria; Perissodactyla; Equidae; Equus.									
OX	NCBI_TaxID=9796;									
RX	[1]									
RP	SEQUENCE FROM N.A.									
RY	MEDLINE=92084125; PubMed=1748301;									
RA	Su X., Morris D.D., McGraw R.A.;									
RT	"Cloning and characterization of gene TNF alpha encoding equine tumor									
RL	necrosis factor alpha.";									
Gene	107.319-321(1991).									
-I-	FUNCTION: TNF IS MAINLY SECRETED BY MACROPHAGES. IT IS A CYTOKINE									
CC	WITH A WIDE VARIETY OF FUNCTIONS. IT CAN CAUSE CYTOLYSIS OF									
CC	CERTAIN TUMOR CELL LINES, IT IS IMPLICATED IN THE INDUCTION OF									
CC	CACHEXIA. IT IS A POTENT PYROGEN CAUSING FEVER BY DIRECT ACTION									
CC	OR BY STIMULATION OF INTERLEUKIN 1 SECRETION. IT CAN STIMULATE									
CC	CELL PROLIFERATION AND INDUCE CELL DIFFERENTIATION UNDER CERTAIN									
CC	CONDITIONS.									
CC	-I- SUBUNIT: HOMOTRIMER.									
CC	-I- SUBCELLULAR LOCATION: TYPE II MEMBRANE PROTEIN. ALSO EXISTS AS AN									
CC	EXTRACELLULAR SOLUBLE FORM.									
CC	-I- PPM: THE SOLUBLE FORM DERIVES FROM THE MEMBRANE FORM BY									
CC	PROTEOLYTIC PROCESSING.									
CC	-I- SIMILARITY: BELONGS TO THE TUMOR NECROSIS FACTOR FAMILY.									
CC	-----									
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CC	use by non-profit institutions as long as its content is in no way									
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CC	entities requires a license agreement (See http://www.isb-sib.ch/announce/									
CC	or send an email to license@isb-sib.ch).									
CC	-----									
DR	EMBL; M64087; AAA30959.1; .									
DR	PIR; J01344; J01344.									
DR	HSSP; P01375; ATSV.									
DR	InterPro; IPR003636; TNF_abc.									
DR	InterPro; IPR000478; TNF_Family.									
DR	Pfam; PF00229; TNF_1.									
DR	PRINTS; PR01234; TNECROSISCT.									
DR	ProDom; PD002012; TNF_abc; 1.									
DR	SMART; SMD0207; TNF_1.									
DR	PROSITE; PS00251; TNF_1; 1.									
DR	PROSITE; PS50049; TNF_2; 1.					</				

RP SEQUENCE OF 70-87.
RA MEDLINE-69380231; PubMed-2777790;
RX Cseh K., Beutler B.;
RT "Alternative cleavage of the cachectin/tumor necrosis factor
RT propeptide results in a larger, inactive form of secreted protein.";
RL J. Biol. Chem. 264:16256-16260(1989).
RN [10]
RP IDENTIFICATION OF MEMBRANE-BOUND FORM.
RX MEDLINE-88165056; PubMed-3349526;
RA Krieglner M., Perez X., Defay K., Albert I., Lu S.D.;
RT "A novel form of TNF/cachectin is a cell surface cytotoxic
RT transmembrane protein: ramifications for the complex physiology of
RT TNF.";
RL Cell 53:45-53(1988).
RN [11]
RP X-RAY CRYSTALLOGRAPHY (1.4 ANGSTROMS) OF 80-235.
RX MEDLINE-99190964; PubMed-10089307;
RA Baeyens K.J., De Bondt H.L., Raeymakers A., Fiers W., De Ranter C.J.;
RT "The structure of mouse tumour-necrosis factor at 1.4 A resolution:
RT towards modulation of its selectivity and trimerization.";
RL Acta Crystallogr. D 55:772-778(1999).
CC -1- FUNCTION: TNF IS MAINLY SECRETED BY MACROPHAGES, IT IS A CYTOKINE
CC WITH A WIDE VARIETY OF FUNCTIONS: IT CAN CAUSE CYTOLYSIS OF
CC CERTAIN TUMOR CELL LINES, IT IS IMPLICATED IN THE INDUCTION OF
CC CACHEXIA, IT IS A POTENT PYROGEN CAUSING FEVER BY DIRECT ACTION
CC OR BY STIMULATION OF INTERLEUKIN 1 SECRETION, IT CAN STIMULATE
CC CELL PROLIFERATION AND INDUCE CELL DIFFERENTIATION UNDER CERTAIN
CC CONDITIONS.
CC -1- SUBUNIT: HOMOTRIMER.
CC -1- SUBCELLULAR LOCATION: TYPE II MEMBRANE PROTEIN. ALSO EXISTS AS AN
CC EXTRACELLULAR SOLUBLE FORM.
CC -1- PTM: THE SOLUBLE FORM DERIVES FROM THE MEMBRANE FORM BY
CC PROTEOLYTIC PROCESSING.
CC -1- DISEASE: CACHEXIA ACCOMPANIES A VARIETY OF DISEASES, INCLUDING
CC CANCER AND INFECTION, AND IS CHARACTERIZED BY GENERAL ILL HEALTH
CC AND MALNUTRITION.
CC -1- SIMILARITY: BELONGS TO THE TUMOR NECROSIS FACTOR FAMILY.
CC -----
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CC -----
DR EMBL; U06950; AAA18594.1; -
DR EMBL; M13049; AAA40457.1; -
DR EMBL; M1731; AAA40458.1; -
DR EMBL; Y00467; CAA68530.1; -
DR EMBL; X02611; CAA26457.1; -
DR EMBL; M20155; AAA40462.1; ALF_SEQ.
DR EMBL; M83296; AAA40459.1; -
DR EMBL; M84196; BAA19512.1; -
DR EMBL; D84194; BAA19512.1; JOINED.
DR EMBL; D84195; BAA19512.1; JOINED.
DR EMBL; D84199; BAA19513.1; -
DR EMBL; D84197; BAA19513.1; JOINED.
DR EMBL; D84198; BAA19513.1; JOINED.
DR PIR; A23127; QWMSN.
DR PIR; A22908; A22908.
DR PIR; A25164; A25164.
DR PIR; A27303; A27303.
DR PIR; A34251; A34251.
DR PIR; S03791; S03791.
DR PDB; 2TNF; 12-OCT-99.
DR MGD; MGI:104798; Tnf.
DR InterPro; IPR003636; Tnf_abc.
DR InterPro; IPR000478; Tnf_family.
DR Pfam; PF00229; Tnf; 1.
DR PRINTS; PR01234; TNECROSISFCT.
DR ProDom; PD002012; Tnf_abc; 1.
DR SMART; SM00207; Tnf; 1.

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DR PROSITE: PS00251, TNF_1; 1.
DR PROSITE: PS50049, TNF_2; 1.
KM Cytokine; Cytotoxin; Transmembrane; Glycoprotein; Signal-anchor;
  3d-structure.
FT PROPEP 1 79 TUMOR NECROSIS FACTOR.
FT CHAIN 80 235 SIGNAL-ANCHOR (TYPE-II MEMBRANE PROTEIN).
FT TRANSMEM 36 56
FT DISULFID 148 179
FT CARBOHYD 86 86
FT CONFLICT 231 231 G -> R (IN REF. 3 AND 4).
SQ SEQUENCE 235 AA; 25895 MW; 1DDDD2A9676D86C5D CRC64;

Query Match 81.8%; Score 657.5; DB 1; Length 235;
Best Local Similarity 78.3%; Pred. No. 1,5e-62;
Matches 123; Conservative 20; Mismatches 13; Indels 1; Gaps 1;

QY 1 VASSRSTPSDKRVAVVANVPAQEGDLOWLNRRANMLLANGVELRNOLVPSREGILYYS 60
   :||||: |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 80 IRRSSONSDDKVAHVAVVANHVOYEQLEMLSGRANMLANGMDLKNQNLVVPADGILYYS 139
   :||||: |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 61 QVLFPGGCGPPTHVLLTTHISRIASVYOTKVLLSAISPCQRETPEGCAEAKPAXEPIYL 120
   :||||: |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 140 QVLFPGGCGPD-YVLLTHTVSFSAISTQEKVNLASAIVSPCKDIPDEAGELKPWEPIYL 198
   :||||: |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYFGIATL 157
   :||||: |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 199 GGVFQLEKGDQLASAEVNLPKYLDFAESGQVYFGVIAL 235
   :||||: |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:

RESULT 12
TNFA_CEREL
ID TNFA_CEREL STANDARD: PRT; 229 AA.
AC P51743:
DT 01-OCT-1996 (Rel. 34, Created)
DT 01-OCT-1996 (Rel. 34, Last sequence update)
DT 15-JUL-1999 (Rel. 39, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (cachectin) (Fragment).
GN TNF OR TNFA.
OS Cervus elaphus (Red deer).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Cervoidae;
OC Cervidae; Cervinae; Cervus.
OX NCBI_TaxID=9680;
RN [1]
RP SEQUENCE FROM N.A.
RA Loehart E.A.;
RL Submitted (SEP-1994) to the EMBL/GenBank/DBD databases.
CC -I- FUNCTION: TNF IS MAINLY SECRETED BY MACROPHAGS, IT IS A CYTOKINE
CC WITH A WIDE VARIETY OF FUNCTIONS. IT CAN CAUSE CYTOLYSIS OF
CC CERTAIN TUMOR CELL LINES, IT IS IMPLICATED IN THE INDUCTION OF
CC CACHEXIA, IT IS A POTENT PYROGEN CAUSING FEVER BY DIRECT ACTION
CC OR BY STIMULATION OF INTERLEUKIN 1 SECRETION, IT CAN STIMULATE
CC CELL PROLIFERATION AND INDUCE CELL DIFFERENTIATION UNDER CERTAIN
CC CONDITIONS.
CC -I- SUBUNIT: HOMOTRIMER (BY SIMILARITY).
CC -I- SUBCELLULAR LOCATION: TYPE II MEMBRANE PROTEIN. ALSO EXISTS AS AN
CC EXTRACELLULAR SOLUBLE FORM (BY SIMILARITY).
CC -I- PTM: THE SOLUBLE FORM DERIVES FROM THE MEMBRANE FORM BY
CC PROTEOLYTIC PROCESSING (BY SIMILARITY).
CC -I- DISEASE: CACHEXIA ACCOMPANIES A VARIETY OF DISEASES, INCLUDING
CC CANCER AND INFECTION, AND IS CHARACTERIZED BY GENERAL ILL HEALTH
CC AND MALNUTRITION.
CC -I- SIMILARITY: BELONGS TO THE TUMOR NECROSIS FACTOR FAMILY.
CC -----
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DR EMBL: U14683; AAA50759.1; -.
DR HSSP: P01375; ATSV.
DR InterPro: IPR003636; TNF_abc.
DR InterPro: IPR000478; TNF_family.
DR Pfam: PF00229; TNF; 1.
DR ProDom: PD002012; TNF_abc; 1.
DR SMART: SM00207; TNF; 1.
DR PROSITE: PS00251; TNF_1; 1.
DR PROSITE: PS50049; TNF_2; 1.
DR Cytokine; Cytotoxin; Transmembrane; Glycoprotein; Signal-anchor.
FT NON_TER .1
FT PROPEP <1 73 BY SIMILARITY.
FT CHAIN 74 229 TUMOR NECROSIS FACTOR.
FT TRANSMEM 31 51 SIGNAL-ANCHOR (TYPE-II MEMBRANE PROTEIN).
FT DISULFID 141 173 BY SIMILARITY.
SQ SEQUENCE 229 AA; 24987 MW; 10DE5F7AA5A7DB35 CRC64;

Query Match 81.2%; Score 653; DB 1; Length 229;
Best Local Similarity 80.9%; Pred. No. 4.2e-62;
Matches 127; Conservative 13; Mismatches 17; Indels 0; Gaps 0;

OY 1 VRSSRTSPDKPVAHVANPQAEQOLWLNRRANLLANGVELRDNLVPSGLYLYS 60
DB 73 LRSSSQASINRPVAVHVNINAGQLWLDSCANLMMNGVLENDQLVVPDGLYLYS 132
OY 61 QVLFPGGCGPSTHVLFTHTISRIVSYOTKVNLSAIPSCORETPEGAEPKWEPIYL 120
DB 133 QVLFPGGCGPSTHVLFTHTISRIVSYOTKVNLSAIPSCORETPEGAEPKWEPIYL 192
OY 121 GGVFQLEKGRDRLSAEINRPDYLDFAESGQVYFGIALL 157
DB 193 GGVFQLEKGRDRLSAEINRPDYLDFAESGQVYFGIALL 229

RESULT 13
TNFA_BOVIN STANDARD; PRT; 233 AA.
ID TNFA_BOVIN 006599; 018779;
AC 01-JUN-1994 (Rel. 29, Created)
DT 01-JUN-1994 (Rel. 29, Last sequence update)
DT 16-OCT-2001 (Rel. 40, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Cachectin).
GN TNF OR TNFA.
OS Bos taurus (Bovine).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]
RP SEQUENCE FROM N.A.
RA MEDLINE=94083525; PubMed=8260599;
RA Cludis I., Cleuter Y., Kettmann R., Buny A., Droogmans L.;
RT "Cloning and characterization of the tandemly arranged bovine
RT lymphocyte and tumor necrosis factor-alpha genes.";
RT Cytokine 5:336-341(1993).
RN [2]
RP SEQUENCE FROM N.A.
RA STRAIN=BOVAN, AND N'DAMA;
RC Itag1 F.;
RT "Bovine TNF-alpha gene.";
RL Submitted (JUL-1997) to the EMBL/GenBank/DBJ databases.
RN [3]
RP SEQUENCE OF 50-233 FROM N.A.
RC TISSUE=Blood;
RA MEDLINE=96006582; PubMed=7590981;
RA Mertens B.E.L.C., Muriuki M., Gaidulis L.;
RT "Cloning of two members of the TNF-superfamily in cattle: CD40 ligand
RT and tumor necrosis factor alpha.";
RT Immunogenetics 42:430-431(1995).
CC -1- FUNCTION: TNF IS MAINLY SECRETED BY MACROPHAGES. IT IS A CYTOKINE
CC WITH A WIDE VARIETY OF FUNCTIONS. IT CAN CAUSE CYTOLYSIS OF
CC CERTAIN TUMOR CELL LINES, IT IS IMPLICATED IN THE INDUCTION OF

```

```

CC CACHEXIA. IT IS A POTENT PYROGEN CAUSING FEVER BY DIRECT ACTION
CC OR BY STIMULATION OF INTERLEUKIN 1 SECRETION. IT CAN STIMULATE
CC CELL PROLIFERATION AND INDUCE CELL DIFFERENTIATION UNDER CERTAIN
CC CONDITIONS.
CC -1- SUBUNIT: HOMOTRIMER.
CC -1- SUBCELLULAR LOCATION: TYPE II MEMBRANE PROTEIN. ALSO EXISTS AS AN
CC EXTRACELLULAR SOLUBLE FORM.
CC -1- PM: THE SOLUBLE FORM DERIVES FROM THE MEMBRANE FORM BY
CC PROTEOLYTIC PROCESSING.
CC -1- DISEASE: CACHEXIA ACCOMPANIES A VARIETY OF DISEASES, INCLUDING
CC CANCER AND INFECTION, AND IS CHARACTERIZED BY GENERAL ILL HEALTH
CC AND MALNUTRITION.
CC -1- SIMILARITY: BELONGS TO THE TUMOR NECROSIS FACTOR FAMILY.
CC -----
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CC or send an email to license@isb-sib.ch).
CC -----
DR EMBL: Z14137; CAA78511.1; -.
DR EMBL: AF011926; AAB84086.1; -.
DR EMBL: AF011927; AAB84087.1; -.
DR EMBL: Z48808; CAA8743.1; -.
DR PIR: S24642; S24642.
DR HSSP: P01375; ATSV.
DR InterPro: IPR003636; TNF_abc.
DR InterPro: IPR000478; TNF_family.
DR Pfam: PF00229; TNF; 1.
DR PRINTS: PR01234; TNCRSISFCT.
DR ProDom: PD002012; TNF_abc; 1.
DR SMART: SM00207; TNF; 1.
DR PROSITE: PS00251; TNF_1; 1.
DR PROSITE: PS50049; TNF_2; 1.
DR Cytokine; Cytotoxin; Transmembrane; Glycoprotein; Signal-anchor;
KW Polymorphism.
FT PROPEP 1 77 BY SIMILARITY.
FT CHAIN 78 233 TUMOR NECROSIS FACTOR.
FT TRANSMEM 36 56 SIGNAL-ANCHOR (TYPE-II MEMBRANE PROTEIN).
FT DISULFID 145 177 BY SIMILARITY.
FT VARIANT 48 48 F -> C (IN STRAIN N'DAMA).
FT CONFLICT 62 62 E -> EQ (IN REF. 3).
SQ SEQUENCE 233 AA; 25439 MW; 8AF55C02A9763B0 CRC64;

Query Match 81.1%; Score 652; DB 1; Length 233;
Best Local Similarity 80.3%; Pred. No. 5.5e-62;
Matches 126; Conservative 15; Mismatches 16; Indels 0; Gaps 0;

OY 1 VRSSRTSPDKPVAHVANPQAEQOLWLNRRANLLANGVELRDNLVPSGLYLYS 60
DB 77 LRSSSQASINRPVAVHVNINAGQLWLDSCANLMMNGVLENDQLVVPDGLYLYS 136
OY 61 QVLFPGGCGPSTHVLFTHTISRIVSYOTKVNLSAIPSCORETPEGAEPKWEPIYL 120
DB 137 QVLFPGGCGPSTHVLFTHTISRIVSYOTKVNLSAIPSCORETPEGAEPKWEPIYL 196
OY 121 GGVFQLEKGRDRLSAEINRPDYLDFAESGQVYFGIALL 157
DB 197 GGVFQLEKGRDRLSAEINRPDYLDFAESGQVYFGIALL 233

RESULT 14
TNFA_PEARLE STANDARD; PRT; 235 AA.
ID TNFA_PEARLE 336939;
AC 01-JUN-1994 (Rel. 29, Created)
DT 01-JUN-1994 (Rel. 29, Last sequence update)
DT 15-JUL-1999 (Rel. 38, Last annotation update)
DE Tumor necrosis factor precursor (TNF-alpha) (Cachectin).
GN TNF OR TNFA.

```

OS Peromyscus leucopus (White-footed mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sclurognathi; Muridae; Sigmodontinae;
 OC Peromyscus.
 RX NCBI_TaxID=10041;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=92218012; PubMed=1348497;
 RA Crew M.D., Filipowsky M.E.;
 RT "Sequence of the tumor necrosis factor/cachectin (TNF) gene from
 Peromyscus leucopus (family Cricetidae).";
 RL Immunogenetics 35:351-353(1992).
 CC -1- FUNCTION: TNF IS MAINLY SECRETED BY MACROPHAGES, IT IS A CYTOKINE
 WITH A WIDE VARIETY OF FUNCTIONS: IT CAN CAUSE CYTOLYSIS OF
 CERTAIN TUMOR CELL LINES, IT IS IMPLICATED IN THE INDUCTION OF
 CACHEXIA, IT IS A POTENT PYROGEN CAUSING FEVER BY DIRECT ACTION
 OR BY STIMULATION OF INTERLEUKIN 1 SECRETION, IT CAN STIMULATE
 CELL PROLIFERATION AND INDUCE CELL DIFFERENTIATION UNDER CERTAIN
 CONDITIONS.
 CC -1- SUBUNIT: HOMOTRIMER.
 CC -1- SUBCELLULAR LOCATION: TYPE II MEMBRANE PROTEIN. ALSO EXISTS AS AN
 EXTRACELLULAR SOLUBLE FORM.
 CC -1- PTM: THE SOLUBLE FORM DERIVES FROM THE MEMBRANE FORM BY
 PROTEOLYTIC PROCESSING.
 CC -1- DISEASE: CACHEXIA ACCOMPANIES A VARIETY OF DISEASES, INCLUDING
 CANCER AND INFECTION, AND IS CHARACTERIZED BY GENERAL ILL HEALTH
 AND MALNUTRITION.
 CC -1- SIMILARITY: BELONGS TO THE TUMOR NECROSIS FACTOR FAMILY.
 CC -----
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 or send an email to license@isb-sib.ch).
 CC -----
 DR EMBL: M59233; AAA40596.1; -.
 DR HSSP: P06804; 2TNF.
 DR InterPro: IPR003636; TNF_abc.
 DR InterPro: IPR000478; TNF_family.
 DR Pfam: PF00229; TNF; 1.
 DR PRINTS: PRO1234; TNECROSISFCT.
 DR Prodom: PD002012; TNF_abc; 1.
 DR SMART: SM00207; TNF; 1.
 DR PROSITE: PS00251; TNF_1; 1.
 DR PROSITE: PS50049; TNF_2; 1.
 DR PROSITE: PS50049; TNF_2; 1.
 KW Cytochrome; Cytochrome; Transmembrane; Glycoprotein; Signal-anchor.
 FT PROPEP 1 79 BY SIMILARITY.
 FT CHAIN 80 235 TUMOR NECROSIS FACTOR.
 FT TRANSMEM 36 56 SIGNAL-ANCHOR (TYPE-II MEMBRANE PROTEIN).
 FT DISULFID 148 179 BY SIMILARITY.
 FT CARBOHYD 86 86 N-LINKED (GLCNAC. . .) (POTENTIAL).
 SQ SEQUENCE 235 AA; 25822 MW; 235A5CFC9F9AC624 CRC64;

Query Match 81.0%; Score 651.5; DB 1; Length 235;
 Best Local Similarity 78.3%; Pred. No. 6.3e-62;
 Matches 123; Conservative 20; Mismatches 13; Indels 1; Gaps 1;

RESULT 15
 ID TNFA_SHEEP
 AC P23383;
 DT 01-NOV-1991 (Rel. 20, Created)
 DT 01-FEB-1994 (Rel. 28, Last sequence update)
 DT 15-JUL-1999 (Rel. 38, Last annotation update)
 DE Tumor necrosis factor precursor (TNF-alpha) (Cachectin).
 GN TNF OR TNFA.
 OS Ovis aries (Sheep).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
 OC Bovidae; Caprinae; Ovis.
 RX NCBI_TaxID=9940;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=91067496; PubMed=2251151;
 RA Young A.J., Hay J.B., Chan J.Y.C.;
 RT "Primary structure of ovine tumor necrosis factor alpha cDNA.";
 RL Nucleic Acids Res. 18:6723-6723(1990).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Alveolar macrophage;
 RX MEDLINE=92112044; PubMed=1765267;
 RA Green I.R., Sargan D.R.;
 RT "Sequence of the cDNA encoding ovine tumor necrosis factor-alpha:
 problems with cloning by inverse PCR.";
 RL Gene 109:203-210(1991).
 RN [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=92155784; PubMed=1786996;
 RA Andrews A.E., Nash A.D., Batcham G.J., Brandon M.R.;
 RT "Molecular cloning, expression and characterization of ovine TNF
 alpha.";
 RL Immunol. Cell Biol. 69:273-283(1991).
 CC -1- FUNCTION: TNF IS MAINLY SECRETED BY MACROPHAGES, IT IS A CYTOKINE
 WITH A WIDE VARIETY OF FUNCTIONS: IT CAN CAUSE CYTOLYSIS OF
 CERTAIN TUMOR CELL LINES, IT IS IMPLICATED IN THE INDUCTION OF
 CACHEXIA, IT IS A POTENT PYROGEN CAUSING FEVER BY DIRECT ACTION
 OR BY STIMULATION OF INTERLEUKIN 1 SECRETION, IT CAN STIMULATE
 CELL PROLIFERATION AND INDUCE CELL DIFFERENTIATION UNDER CERTAIN
 CONDITIONS.
 CC -1- SUBUNIT: HOMOTRIMER.
 CC -1- SUBCELLULAR LOCATION: TYPE II MEMBRANE PROTEIN. ALSO EXISTS AS AN
 EXTRACELLULAR SOLUBLE FORM.
 CC -1- PTM: THE SOLUBLE FORM DERIVES FROM THE MEMBRANE FORM BY
 PROTEOLYTIC PROCESSING.
 CC -1- DISEASE: CACHEXIA ACCOMPANIES A VARIETY OF DISEASES, INCLUDING
 CANCER AND INFECTION, AND IS CHARACTERIZED BY GENERAL ILL HEALTH
 AND MALNUTRITION.
 CC -1- SIMILARITY: BELONGS TO THE TUMOR NECROSIS FACTOR FAMILY.
 CC -----
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 or send an email to license@isb-sib.ch).
 CC -----
 DR EMBL: X55966; CAA39437.1; -.
 DR EMBL: X55152; CAA38952.1; -.
 DR EMBL: X56756; CAA40076.1; -.
 DR EMBL: A19163; CAA01445.1; -.
 DR PIR: S13114; S13114.
 DR PIR: S20661; S20661.
 DR PIR: JH0529; JH0529.
 DR HSSP: P01375; 4TSV.
 DR InterPro: IPR003636; TNF_abc.
 DR InterPro: IPR000478; TNF_family.
 DR Pfam: PF00229; TNF; 1.
 DR PRINTS: PRO1234; TNECROSISFCT.

DR PRODOM: PD002012; TNF_abc; 1.
DR SMART; SM00207; TNF_1.
DR PROSITE; PS00251; TNF_1; 1.
DR PROSITE; PS50049; TNF_2; 1.
KW Cytochrome; Cytochrome; Transmembrane; Glycoprotein; Signal-anchor.
FT PROPEP 1 77
FT CHAIN 78 234 TUMOR NECROSIS FACTOR.
FT TRANSMEM 36 56 SIGNAL-ANCHOR (TYPE-II MEMBRANE PROTEIN).
FT DISULFD 146 178 BY SIMILARITY.
FT CARBOHYD 96 96 N-LINKED (GLCNAC. . .) (POTENTIAL).
FT CONFLICT 63 63 MISSING (IN REF. 1).
SQ SEQUENCE 234 AA; 25536 MM; 4BCF8CCAB7956B88 CRC64;

Query Match 80.8%; Score 650; DB 1; Length 234;
Best Local Similarity 80.3%; Pred. No. 9.1e-62;
Matches 126; Conservative 15; Mismatches 16; Indels 0; Gaps 0;

OY 1 VRSSRTPSDKPVAVHVNANPOAEGOLWLNRRANALANGVELRDNOIYVPESEGLYLYS 60
DB 78 LRSSQASNNKPVAVHVNANISAPQLRMGDSYANALMANGVELKDQIVPTDGLIYIS 137
OY 61 QVLFKGGCCPSTHVLTLTHTISRIAVSYQTKVNLISAIKSPCQRETPEGAEAKPMXEPITL 120
DB 138 QVLFKGGCCPSTHVLTLTHTISRIAVSYQTKVNLISAIKSPCHRETLLEGAEAKPMYEPITQ 197
OY 121 GGVFQLEKGDRLSAFINRPDIYDFAEISGVYFGITL 157
DB 198 GGVFQLEKGDRLSAFINRPDIYDFAEISGVYFGITL 234

Search completed: August 30, 2002, 17:37:50
Job time: 97 sec

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OM protein - protein search, using sw model

Run on: August 30, 2002, 17:35:03 ; Search time 27.75 Seconds

(without alignments)
978.746 Million cell updates/sec

Title: US-09-981-289a-20

Perfect score: 804
Sequence: 1 VRSSSRTPSDKPAHVAVNP.....RPDYLDPAESGQYVFIIAL 157

Scoring table: BIOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 562222 seqs, 172994929 residues

Total number of hits satisfying chosen parameters: 562222

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :

SPTREMBL_19:*
1: sp_archaea:*
2: sp_bacteria:*
3: sp_fungi:*
4: sp_human:*
5: sp_invertebrate:*
6: sp_mammal:*
7: sp_mmc:*
8: sp_organelle:*
9: sp_plant:*
10: sp_protist:*
11: sp_virus:*
12: sp_virus:*
13: sp_viridiales:*
14: sp_viridiales:*
15: sp_virus:*
16: sp_bacteriophage:*
17: sp_archaea:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	797	99.1	157	4	043647
2	793	98.6	232	4	09UIV3
3	767	95.4	149	6	097543
4	714	88.8	149	6	097538
5	714	88.8	149	6	097538
6	714	88.8	149	6	097538
7	710	88.3	217	6	09BEG1
8	701	87.2	234	6	09BEG1
9	682	84.8	233	6	09BEG1
10	668	83.1	217	6	09BEG1
11	662	82.3	234	6	028320
12	661	82.2	138	6	09TGT7
13	659	82.0	191	6	09MYZ2
14	651.5	81.0	232	11	035853
15	649	80.7	216	6	09BEC4
16	638.5	79.4	235	11	09J127

17	635.5	79.0	235	11	09J126	09J126 rattus norv
18	634.5	78.9	156	11	09J124	09J124 silymodon hl
19	620.5	77.2	216	6	09BEC9	09BEC9 ochotona pr
20	614	76.4	215	6	09BEE8	09BEE8 erinaceus e
21	608.5	75.7	217	11	09ERC6	09ERC6 peromyscus
22	607	75.5	217	6	09BEC5	09BEC5 tenrec ecau
23	604.5	75.2	216	11	070332	070332 mesocricetu
24	600	74.6	215	11	099ND1	099ND1 tamiasciuru
25	557	69.3	216	6	09BEE0	09BEE0 macropus ru
26	471.5	58.6	214	6	09BEE3	09BEE3 didelphis m
27	468	58.2	99	6	09BEE8	09BEE8 bos taurus
28	403	50.1	104	6	027978	027978 meriones un
29	299	37.2	101	11	09R136	09R136 canis fam11
30	293	36.4	65	6	095N81	095N81 canis fam11
31	292	36.3	66	4	09P1Q2	09P1Q2 homo sapien
32	271.5	33.8	205	11	09JMI2	09JMI2 marmota mon
33	271.5	33.8	205	11	09JMI0	09JMI0 marmota mon
34	237.5	29.5	225	13	09IB42	09IB42 paralichthy
35	235.5	29.3	225	13	09IB41	09IB41 paralichthy
36	220	27.4	246	13	09I970	09I970 oncorhynch
37	218.5	27.2	205	4	09UKS8	09UKS8 homo sapien
38	218	27.1	246	13	09I976	09I976 oncorhynch
39	216	26.9	127	11	09ERC9	09ERC9 mesocricetu
40	206	25.6	255	13	09IB10	09IB10 salvelinus
41	206	25.6	255	13	09DEP9	09DEP9 oncorhynch
42	197	24.5	41	6	09XT69	09XT69 canis fam11
43	182.5	22.7	174	4	09S150	09S150 homo sapien
44	171	21.3	280	6	09MYL6	09MYL6 macaca neme
45	171	21.3	280	6	09BDM5	09BDM5 macaca mula

ALIGNMENTS

RESULT 1	043647	PRELIMINARY:	PRT:	157 AA.
ID	043647			
AC	043647			
DT	01-JUN-1998 (TREMBLrel. 06, Created)			
DT	01-JUN-1998 (TREMBLrel. 06, Last sequence update)			
DE	01-DEC-2001 (TREMBLrel. 19, Last annotation update)			
DT	TUMOR NECROSIS FACTOR ALPHA (FRAGMENT).			
GN	TNFA.			
OS	Homo sapiens (Human).			
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;			
OC	Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.			
OX	NCBI_TaxID=9606;			
RN	[1]			
RP	SEQUENCE FROM N.A.			
RA	Jang J.S., Kim B.E.;			
RL	Submitted (JAN-1998) to the EMBL/Genbank/DBJ databases.			
DR	EMBL: AF043342; AAC03542.1; ..			
DR	HSSP: P01375; IABM.			
DR	InterPro: IPR003636; TNF_abc.			
DR	InterPro: IPR004478; TNF_family.			
DR	Pfam: PF00229; TNF_1.			
DR	PRINTS: PR01234; TNFROSISFCT.			
DR	ProDom: PD002012; TNF_abc; 1.			
DR	SMART: SM00207; TNF_1.			
DR	PROSITE: PS00251; TNF_1; 1.			
DR	PROSITE: PS0049; TNF_2; 1.			
FT	NON_TER			
SQ	SEQUENCE 157 AA: 17380 MW; D1344822267B9F20 CRC64;			

Query Match 99.1%; Score 797; DB 4; Length 157;
Best Local Similarity 98.7%; Pred. No. 2e-80;
Matches 155; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 VRSSSRTPSDKPAHVAVNPQAEGQLQMLNRRANALLANGVELRDQLVPSGGLYIIS 60
DB 1 VRSSSRTPSDKPAHVAVNPQAEGQLQMLNRRANALLANGVELRDQLVPSGGLYIIS 60

OY 61 OVLFGGCGPSTHVLTLTHTISRAVSYQTQVNLNLSAIPSCOREPEGAAPKXEPYIL 120
 DB 61 OVLFGGCGPSTHVLTLTHTISRAVSYQTQVNLNLSAIPSCOREPEGAAPKXEPYIL 120
 OY 121 GGVFQLEKGRLSAELNRPDIYDFEASGVYFGIATL 157
 DB 121 GGVFQLEKGRLSAELNRPDIYDFEASGVYFGIATL 157
 RESULT 2
 OYU1V3 PRELIMINARY: PRT: 232 AA.
 AC OYU1V3:
 DT 01-MAY-2000 (TREMBLrel. 13, Created)
 DT 01-MAY-2000 (TREMBLrel. 13, Last sequence update)
 DT 01-DEC-2001 (TREMBLrel. 19, Last annotation update)
 DE TUMOR NECROSIS FACTOR.
 GN TNF.
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.
 OX NCBI_TaxID=9606;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=93272029; PubMed=8499947;
 RA Irls F., Bougueleret L., Prieur S., Caterina D., Primas G., Perrot V.,
 RA Juka J., Rodriguez-Tome P., Claverie J., Cohen D., Dausset J.;
 RT "Dense Alu clustering and a potential new member of the NFkappa
 RL family within a 90 kilobase HLA class III segment.";
 RL Nat. Genet. 3:137-145(1993).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=96215741; PubMed=8629302;
 RA Utans U., Oust W.C., McManus B.M., Wilson J.E., Arceci R.J.,
 RA Wallace A.F., Russell M.E.;
 RT "Allograft inflammatory factor-1. A cytokine-responsive macrophage
 RL molecule expressed in transplanted human hearts.";
 RL Transplantation 61:1387-1392(1996).
 RN [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=96005655; PubMed=7590964;
 RA Holzinger I., de Baey A., Messer G., Kick G., Zwierzina H.,
 RA Weiss E.H.;
 RT "Cloning and genomic characterization of LST1: a new gene in the human
 RL TNF region.";
 RL Immunogenetics 42:315-322(1995).
 RN [4]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=93208881; PubMed=7916655;
 RA Browning J.L., Ngam-ek A., Lawton P., Demarinis J., Tizard R.,
 RA Chow E.P., Hession C., O'Brien-Greco B., Foley S.F., Ware C.F.;
 RT "Lymphotoxin-beta: A new member of the TNF family that forms a
 RL heteromeric complex with lymphotoxin on the cell surface.";
 RL Cell 72:847-856(1993).
 RN [5]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=86016093; PubMed=2995927;
 RA Nedwin G.E., Naylor S.L., Sakaguchi A.Y., Smith D., Jarrett-Nedwin J.,
 RA Pennica D., Goeddel D.V., Gray P.W.;
 RT "Human lymphotoxin and tumor necrosis factor genes: structure,
 RL homology and chromosomal localization.";
 RL Nucleic Acids Res. 13:6361-6373(1985).
 RN [6]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=9106846; PubMed=1670638;
 RA Messer G., Spengler U., Jung M.C., Honold G., Bloemer K., Page G.R.,
 RA Rietmuller G., Weiss E.H.;
 RT "Polymorphic Structure of the Tumor Necrosis Factor (TNF) Locus: An
 RT Ncol Polymorphism in the First Intron of the Human TNF-beta Gene
 RT Correlates with A Variant Amino Acid in Position 26 and a Reduced
 RL Level of TNF-beta Production.";
 RL J. Exp. Med. 173:209-219(1991).
 RN [7]

RP SEQUENCE FROM N.A.
 RX MEDLINE=91139175; PubMed=1671667;
 RA Abraham L.J., Du D.C., Zahedi K., Dawkins R.L., Whitehead A.S.;
 RT "Haplotypic polymorphisms of the TNF gene.";
 RL Immunogenetics 33:50-53(1991).
 RN [8]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=94362679; PubMed=8081366;
 RA Albertella M.R., Campbell D.R.;
 RT "Characterization of a novel gene in the human major
 RT histocompatibility complex that encodes a potential new member of the
 RT I kappa B family of proteins.";
 RL Hum. Mol. Genet. 3:793-799(1994).
 RN [9]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=95324911; PubMed=7601445;
 RA Peelman L., Chardon P., Nunes M., Renard C., Geoffroin C., Valman M.,
 RA Van Zeveren A., Coppieters W., Van de Weghe A., Bouquet Y., Choy W.,
 RA Strominger J., Spies T.;
 RT "The BAT1 Gene in the MHC Encodes an Evolutionarily Conserved Putative
 RL Nuclear RNA Helicase of the D-E-A-D Family.";
 RL Genomics 26:210-218(1995).
 RN [10]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=20132445; PubMed=10668961;
 RA Neville M.J., Campbell R.D.;
 RT "Alternative splicing of the LST-1 gene located in the major
 RT histocompatibility complex on human chromosome 6.";
 RL DNA Seq. 8:155-160(1997).
 RN [11]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=98035883; PubMed=9367684;
 RA de Baey A., Fellerhoff B., Maier S., Martinozzi S., Weidie U.,
 RA Weiss E.H.;
 RT "Complex expression pattern of the TNF region gene LST1 through
 RL differential regulation, initiation, and alternative splicing.";
 RL Genomics 45:591-600(1997).
 RN [12]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=98149985; PubMed=9480751;
 RA Shina T., Tamaki N., Oka A., Yamagata T., Yamagata N., Kikkawa E.,
 RA Goto K., Mizuki N., Watanabe K., Fukuzumi Y., Taguchi S., Sugawara C.,
 RA Ono A., Chen L., Yamazaki M., Tashiro H., Ando A., Ikemura T.,
 RA Kimura M., Inoko H.;
 RT "Nucleotide sequencing analysis of the 146-kilobase segment around the
 RL Ikb1 and MICA genes at the centromeric end of the HLA class I
 RT region.";
 RL Genomics 47:372-382(1998).
 DR EMBL: Y14768; CAA75070.1; -;
 DR HSSP: P01375; ATSV.
 DR InterPro: IPR003636; TNF_abc.
 DR InterPro: IPR000478; TNF_family.
 DR Pfam: PF00229; TNF; 1.
 DR PRINTS: PR01234; TNCRSISFCT.
 DR PRODOM: PD002012; TNF_abc; 1.
 DR SMART: SM00207; TNF; 1.
 DR PROSITE: PS00049; TNF_1; 1.
 DR PROSITE: PS00049; TNF_2; 1.
 SQ SEQUENCE 232 AA; 25446 MW; EAD71B19C6AE0D03 CRC64;

Query Match 98.6%; Score 793; DB 4; Length 232;
 Best Local Similarity 99.4%; Pred. No. 9.3e-80;
 Matches 154; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 3 SSSRPSDKPVAHVYVANOAGQOLMNRNALLANGVELRDNLVVPSEGLYLIYSQV 62
 DB 78 SSSRPSDKPVAHVYVANOAGQOLMNRNALLANGVELRDNLVVPSEGLYLIYSQV 137
 OY 63 LFKGGCGPSTHVLTLTHTISRAVSYQTQVNLNLSAIPSCOREPEGAAPKXEPYIL 122
 DB 138 LFKGGCGPSTHVLTLTHTISRAVSYQTQVNLNLSAIPSCOREPEGAAPKXEPYIL 197

QY 123 VF0LEKGRLSAEINRPDYLDFAESGQVYFGIIAL 157
|||||
Db 198 VF0LEKGRLSAEINRPDYLDFAESGQVYFGIIAL 232

RESULT 3
097543 PRELIMINARY: PRT: 149 AA.

AC 097543;
DT 01-MAY-1999 (TREMBLrel. 10, Created)
DT 01-MAY-1999 (TREMBLrel. 10, Last sequence update)
DT 01-OCT-2001 (TREMBLrel. 18, Last annotation update)
DE TUMOR NECROSIS FACTOR ALPHA (FRAGMENT).
GN TNF-ALPHA.
OS Actus nancyanae (Owl monkey).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Platyrrhini; Cebidae; Aotinae; Actus.
OX NCBI_TaxID=37293;
RN [1]
RP SEQUENCE FROM N.A.
RA Echeverry S.J., Hernandez E., Moreno A., Patarroyo M.E., Murillo L.A.;
RT "Identification, cloning and sequencing of different Interleukin genes
in 4 Actus species."
RL Submitted (JUL-1997) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF014513; AAD01539.1; -.
DR HSSP; P01375; ATSV.
DR InterPro; IPR003636; TNF_abc.
DR InterPro; IPR000478; TNF_family.
DR Pfam; PF00229; TNF; 1.
DR PRINTS; PR01234; TNECROSISFCT.
DR PRODOM; PD002012; TNF_abc; 1.
DR SMART; SM00207; TNF; 1.
DR PROSITE; PS00251; TNF_1; 1.
DR PROSITE; PS50049; TNF_2; 1.
FT NON_TER 1
FT NON_TER 149
SQ SEQUENCE 149 AA; 16466 MW; 3C2A6140778EFABA CRC64;

Query Match 95.48; Score 767; DB 6; Length 149;
Best Local Similarity 99.38; Pred. No. 3.9e-77;
Matches 148; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 8 PSDKPVAVHVNPPQAEGLQWLNRRANLLANGVELRDNOQVPSSEGLYLYSQVLFKQ 67
|||||
Db 1 PSDKPVAVHVNPPQAEGLQWLNRRANLLANGVELRDNOQVPSSEGLYLYSQVLFKQ 60
|||||
QY 68 GCPSTHVLTHRTISRIASVQTKVNLSSAIKSPCQRETPEGAEAKPMWEPTILGSGVFOLE 127
|||||
Db 61 GCPSTHVLTHRTISRIASVQTKVNLSSAIKSPCQRETPEGAEAKPMWEPTILGSGVFOLE 120
|||||
QY 128 KGDRLSAEINRPDYLDFAESGQVYFGIIA 156
|||||
Db 121 KGDRLSAEINRPDYLDFAESGQVYFGIIA 149

RESULT 4
097538 PRELIMINARY: PRT: 149 AA.

AC 097538;
DT 01-MAY-1999 (TREMBLrel. 10, Created)
DT 01-MAY-1999 (TREMBLrel. 10, Last sequence update)
DT 01-OCT-2001 (TREMBLrel. 18, Last annotation update)
DE TUMOR NECROSIS FACTOR ALPHA (FRAGMENT).
GN TNF-ALPHA.
OS Actus vociferans (noisy night monkey).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Platyrrhini; Cebidae; Aotinae; Actus.
OX NCBI_TaxID=57176;
RN [1]
RP SEQUENCE FROM N.A.
RA Echeverry S.J., Hernandez E., Moreno A., Patarroyo M.E., Murillo L.A.;
RT "Identification, cloning and sequencing of different Interleukin genes

RT in 4 Actus species";
RL Submitted (JUL-1997) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF014508; AAD01534.1; -.
DR HSSP; P01375; ATSV.
DR InterPro; IPR003636; TNF_abc.
DR InterPro; IPR000478; TNF_family.
DR Pfam; PF00229; TNF; 1.
DR PRINTS; PR01234; TNECROSISFCT.
DR PRODOM; PD002012; TNF_abc; 1.
DR SMART; SM00207; TNF; 1.
DR PROSITE; PS00251; TNF_1; 1.
DR PROSITE; PS50049; TNF_2; 1.
FT NON_TER 1
FT NON_TER 149
SQ SEQUENCE 149 AA; 16415 MW; 86F1B9BCED16E689 CRC64;

Query Match 88.8%; Score 714; DB 6; Length 149;
Best Local Similarity 91.98; Pred. No. 3e-71;
Matches 137; Conservative 4; Mismatches 8; Indels 0; Gaps 0;

QY 8 PSDKPVAVHVNPPQAEGLQWLNRRANLLANGVELRDNOQVPSSEGLYLYSQVLFKQ 67
|||||
Db 1 PSDKPVAVHVNPPQAEGLQWLNRRANLLANGVELRDNOQVPSSEGLYLYSQVLFKQ 60
|||||
QY 68 GCPSTHVLTHRTISRIASVQTKVNLSSAIKSPCQRETPEGAEAKPMWEPTILGSGVFOLE 127
|||||
Db 61 GCPSTHVLTHRTISRIASVQTKVNLSSAIKSPCQRETPEGAEAKPMWEPTILGSGVFOLE 120
|||||
QY 128 KGDRLSAEINRPDYLDFAESGQVYFGIIA 156
|||||
Db 121 KGDRLSAEINRPDYLDFAESGQVYFGIIA 149

RESULT 5
097TG8 PRELIMINARY: PRT: 149 AA.

AC 097TG8;
DT 01-MAY-2000 (TREMBLrel. 13, Created)
DT 01-MAY-2000 (TREMBLrel. 13, Last sequence update)
DT 01-DEC-2001 (TREMBLrel. 19, Last annotation update)
DE TUMOR NECROSIS FACTOR ALPHA (FRAGMENT).
GN TNF-ALPHA.
OS Actus nigricaps (black-headed night monkey).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Platyrrhini; Cebidae; Aotinae; Actus.
OX NCBI_TaxID=57175;
RN [1]
RP SEQUENCE FROM N.A.
RA Patarroyo M.E., Hernandez E., Echeverry S.J., Mendez J.A.,
RT "Actus nigricaps gene for TNF alpha."
RL Submitted (OCT-1998) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF097328; AAF21303.1; -.
DR HSSP; P01375; ATSV.
DR InterPro; IPR003636; TNF_abc.
DR InterPro; IPR000478; TNF_family.
DR Pfam; PF00229; TNF; 1.
DR PRINTS; PR01234; TNECROSISFCT.
DR PRODOM; PD002012; TNF_abc; 1.
DR SMART; SM00207; TNF; 1.
DR PROSITE; PS00251; TNF_1; 1.
DR PROSITE; PS50049; TNF_2; 1.
FT NON_TER 1
FT NON_TER 149
SQ SEQUENCE 149 AA; 16415 MW; 86F1B9BCED16E689 CRC64;

Query Match 88.8%; Score 714; DB 6; Length 149;
Best Local Similarity 91.98; Pred. No. 3e-71;
Matches 137; Conservative 4; Mismatches 8; Indels 0; Gaps 0;

QY 8 PSDKPVAVHVNPPQAEGLQWLNRRANLLANGVELRDNOQVPSSEGLYLYSQVLFKQ 67

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|||||
Db 1 PSDRPVAVHANPOAEGOLWLNRRANALLANGVELRDNLVVPSEGLYLVYSGVLFKQ 60
QY 68 GCPSTHVLTTHTISRINAVYOTKYNLLSAIKSPCQRETPGAEAKPKXPETIYLGVPLE 127
Db 61 GCPSTHVLTTHTISRINAVYOTKYNLLSAIKSPCQRETPGAKTNPMWEPYIYLGVPLE 120
QY 128 KGDRLSAEINRPDYLDFAESGQVYFGITA 156
Db 121 KGDRLSAEINRPDYLDFAESGQVYFGITA 149

RESULT 6
Q9BEG0 PRELIMINARY; PRT; 217 AA.
ID Q9BEG0
AC Q9BEG0
DT 01-JUN-2001 (Tremblrel. 17, Created)
DT 01-JUN-2001 (Tremblrel. 17, Last sequence update)
DE TUMOR NECROSIS FACTOR (FRAGMENT).
GN TNFA.
OS Cyclopes didactylus (silky anteater).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Edentata; Myrmecophagidae; Cyclopes.
OX NCBI_TaxID=84074;
RN [1]
RP SEQUENCE FROM N.A.
RA van Dijk M.A.M., de Jong W.W.;
RT "Indels indicate that rodents are monophyletic and lagomorphs are
their sister group."
RL Submitted (Feb-2000) to the EMBL/GenBank/DBJ databases.
DR EMBL; AJ286828; CAC28514.1; -.
DR HSSP; P01375; IABM.
DR InterPro; IPR003636; TNF_family.
DR InterPro; IPR000478; TNF_family.
DR Pfam; PF00229; TNF_1.
DR PRINTS; PR01234; TNECROSISFCT.
DR PRODOM; PD002012; TNF_abc; 1.
DR SMART; SM00207; TNF_1.
DR PROSITE; PS00251; TNF_1; 1.
DR PROSITE; PS50049; TNF_2; 1.
FT NON_TER 1
FT NON_TER 1
SQ SEQUENCE 217 AA; 23753 MW; F760E887F6C29EBB CRC64;

Query Match 88.8%; Score 714; DB 6; Length 217;
Best Local Similarity 91.3%; Pred. No. 4.9e-71; Indels 0; Gaps 0;
Matches 136; Conservative 7; Mismatches 6; Indels 0; Gaps 0;

QY 1 VRSSRTSPDKPVAVHANPOAEGOLWLNRRANALLANGVELRDNLVVPSEGLYLVY 60
Db 69 LRSSSRTPSPDKPVAVHANPOAEGOLWLNRRANALLANGVELRDNLVVPSEGLYLVY 128
QY 61 QVLFKGGCSTHVLTTHTISRINAVYOTKYNLLSAIKSPCQRETPGAEAKPKXPETIY 120
Db 129 QVLFKGGCSTHVLTTHTISRINAVYOTKYNLLSAIKSPCQRETPGAEAKPKXPETIY 188
QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQ 149
Db 189 GGVFQLEKGDRLSAEINRPDYLDFAESGQ 217

RESULT 7
Q9BEG1 PRELIMINARY; PRT; 217 AA.
ID Q9BEG1
AC Q9BEG1
DT 01-JUN-2001 (Tremblrel. 17, Created)
DT 01-JUN-2001 (Tremblrel. 17, Last sequence update)
DE TUMOR NECROSIS FACTOR (FRAGMENT).
GN TNFA.
OS Bradypus tridactylus (Pale-throated three-toed sloth).
OS
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OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Edentata; Bradypodidae; Bradypus.
OX NCBI_TaxID=9354;
RN [1]
RP SEQUENCE FROM N.A.
RA van Dijk M.A.M., de Jong W.W.;
RT "Indels indicate that rodents are monophyletic and lagomorphs are
their sister group."
RL Submitted (Feb-2000) to the EMBL/GenBank/DBJ databases.
DR EMBL; AJ286827; CAC28513.1; -.
DR HSSP; P01375; IABM.
DR InterPro; IPR003636; TNF_abc.
DR InterPro; IPR000478; TNF_family.
DR Pfam; PF00229; TNF_1.
DR PRINTS; PR01234; TNECROSISFCT.
DR PRODOM; PD002012; TNF_abc; 1.
DR SMART; SM00207; TNF_1.
DR PROSITE; PS00251; TNF_1; 1.
DR PROSITE; PS50049; TNF_2; 1.
FT NON_TER 1
FT NON_TER 1
SQ SEQUENCE 217 AA; 23655 MW; A7056710B6238074 CRC64;

Query Match 88.3%; Score 710; DB 6; Length 217;
Best Local Similarity 91.3%; Pred. No. 1.4e-70; Indels 0; Gaps 0;
Matches 136; Conservative 6; Mismatches 7; Indels 0; Gaps 0;

QY 1 VRSSRTSPDKPVAVHANPOAEGOLWLNRRANALLANGVELRDNLVVPSEGLYLVY 60
Db 69 LRSSSRTPSPDKPVAVHANPOAEGOLWLNRRANALLANGVELRDNLVVPSEGLYLVY 128
QY 61 QVLFKGGCSTHVLTTHTISRINAVYOTKYNLLSAIKSPCQRETPGAEAKPKXPETIY 120
Db 129 QVLFKGGCSTHVLTTHTISRINAVYOTKYNLLSAIKSPCQRETPGAEAKPKXPETIY 188
QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQ 149
Db 189 GGVFQLEKGDRLSAEINRPDYLDFAESGQ 217

RESULT 8
Q9TTJ3 PRELIMINARY; PRT; 234 AA.
ID Q9TTJ3
AC Q9TTJ3
DT 01-MAY-2000 (Tremblrel. 13, Created)
DT 01-MAY-2000 (Tremblrel. 13, Last sequence update)
DE TUMOR NECROSIS FACTOR-ALPHA.
GN TNFA.
OS Equus caballus (Horse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
OX NCBI_TaxID=9796;
RN [1]
RP SEQUENCE FROM N.A.
RC SRRAIN-THOROUGHRED; TISSUE=ARTERIAL ENDOTHELIUM;
RA Ishida N., Sato F., Hasegawa T.;
RT "Molecular cloning of equine tumor necrosis factor-alpha mRNA.";
RL Submitted (DEC-1999) to the EMBL/GenBank/DBJ databases.
DR EMBL; AB035735; BAA88349.1; -.
DR HSSP; P01375; IABM.
DR InterPro; IPR003636; TNF_abc.
DR InterPro; IPR000478; TNF_family.
DR Pfam; PF00229; TNF_1.
DR PRINTS; PR01234; TNECROSISFCT.
DR PRODOM; PD002012; TNF_abc; 1.
DR SMART; SM00207; TNF_1.
DR PROSITE; PS00251; TNF_1; 1.
DR PROSITE; PS50049; TNF_2; 1.
SQ SEQUENCE 234 AA; 25430 MW; 2384D4950A21F377 CRC64;
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Query Match      87.2%: Score 701; DB 6; Length 234;
Best Local Similarity 87.3%: Pred. NO. 1.5e-69;
Matches 137; Conservative 10; Mismatches 10; Indels 0; Gaps 0;

QY 1 VRSSRTSPDKPVAVVYVAVNPOAEGOLWLNRRANALLANGVELNDQNVVPSGGLYLYIS 60
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
DB 78 LRSSRTSPDKPVAVVYVAVNPOAEGOLWLSGRANALLANGVELNDQNVVPSGGLYLYIS 137
   |||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

QY 61 QVLFKGGCSTHVLHTHTISRIASVYQTKVNLISAISPCQRETPGCAEAKPMXEPIYL 120
   |||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
DB 138 QVLFKGGCSTHVLHTHTISRIASVYPSKVNLSAISKSLANTEPPEGCAEAKPMXEPIYL 197
   |||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYEGIIAL 157
   |||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
DB 198 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYEGIIAL 234

RESULT 9
Q9BEA1 ID Q9BEA1 PRELIMINARY; PRT; 233 AA.
AC Q9BEA1;
DT 01-JUN-2001 (TREMBlrel. 17, Created)
DT 01-JUN-2001 (TREMBlrel. 17, Last sequence update)
DE TUMOR NECROSIS FACTOR ALPHA.
GN TNF-ALPHA.
OS Turstrops truncatus (Atlantic bottle-nosed dolphin).
OC Eukaryota; Metazoa; Chordata; Craniala; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Cetacea; Odontoceti; Delphinidae;
OC Turstrops.
OX NCBI_TaxID=9739;
RN [1]
RP SEQUENCE FROM N.A.
RA Shoja Y., Inoue Y., Jinbo T., Itou T., Sakai T.;
RT "Molecular cloning and functional expression of Bottle-Nosed
   Dolphin(Turstrops truncatus) Tumor necrosis factor alpha.";
RL Submitted (SEP-2000) to the EMBL/GenBank/DBJ databases.
DR EMBL: AB049358; BAB39855.1; -.
DR HSSP: P01375; 4TSV.
DR InterPro: IPR003636; TNF_abc.
DR InterPro: IPR000478; TNF_family.
DR Pfam: PF00229; TNF_1.
DR PRINTS: PR01234; TNECROSISFCT.
DR ProDom: PD002012; TNF_abc; 1.
DR SMART: SM00207; TNF_1.
DR PROSITE: PS00251; TNF_1; 1.
DR PROSITE: PS50049; TNF_2; 1.
DR SEQUENCE 233 AA; 25404 MW; 71CC39C699CC49D9 CRC64;

Query Match      84.8%: Score 682; DB 6; Length 233;
Best Local Similarity 83.4%: Pred. NO. 1.9e-67;
Matches 131; Conservative 12; Mismatches 14; Indels 0; Gaps 0;

QY 1 VRSSRTSPDKPVAVVYVAVNPOAEGOLWLNRRANALLANGVELNDQNVVPSGGLYLYIS 60
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
DB 77 LRSSRTSPDKPVAVVYVAVNPOAEGOLWLSGRANALLANGVELNDQNVVPSGGLYLYIS 136
   |||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

QY 61 QVLFKGGCSTHVLHTHTISRIASVYQTKVNLISAISPCQRETPGCAEAKPMXEPIYL 120
   |||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
DB 137 QVLFKGGCSTHVLHTHTISRIASVYPSKVNLSAISKSLANTEPPEGCAEAKPMXEPIYL 196
   |||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYEGIIAL 157
   |||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
DB 197 GGVFQLEKGDRLSAEINRPDYLDFAESGQVYEGIIAL 233

RESULT 10
Q9BEA4 ID Q9BEA4 PRELIMINARY; PRT; 217 AA.
AC Q9BEA4;
DT 01-JUN-2001 (TREMBlrel. 17, Created)
DT 01-JUN-2001 (TREMBlrel. 17, Last sequence update)

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DT 01-DEC-2001 (TREMBlrel. 19, Last annotation update)
DE TUMOR NECROSIS FACTOR (FRAGMENT).
GN TNFA.
OS Cabassous unicinctus (Southern naked-tailed armadillo).
OC Eukaryota; Metazoa; Chordata; Craniala; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Edentata; Daeypodidae; Cabassous.
OX NCBI_TaxID=48852;
RN [1]
RP SEQUENCE FROM N.A.
RA van Dijk M.A.M., de Jong W.W.;
RT "Indels indicate that rodents are monophyletic and lagomorphs are
   their sister group.";
RL Submitted (FEB-2000) to the EMBL/GenBank/DBJ databases.
DR EMBL: AJ286829; CAC28518.1; -.
DR HSSP: P01375; 4TSV.
DR InterPro: IPR003636; TNF_abc.
DR InterPro: IPR000478; TNF_family.
DR Pfam: PF00229; TNF_1.
DR PRINTS: PR01234; TNECROSISFCT.
DR ProDom: PD002012; TNF_abc; 1.
DR SMART: SM00207; TNF_1.
DR PROSITE: PS00251; TNF_1; 1.
DR PROSITE: PS50049; TNF_2; 1.
FT NON_TER 1 1
FT NON_TER 217 217
SQ SEQUENCE 217 AA; 23742 MW; 83C591DD6883FD86 CRC64;

Query Match      83.1%: Score 668; DB 6; Length 217;
Best Local Similarity 85.9%: Pred. NO. 6.2e-66;
Matches 128; Conservative 9; Mismatches 12; Indels 0; Gaps 0;

QY 1 VRSSRTSPDKPVAVVYVAVNPOAEGOLWLNRRANALLANGVELNDQNVVPSGGLYLYIS 60
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
DB 69 LRSSRTSPDKPVAVVYVAVNPOAEGOLWLSGRANALLANGVELNDQNVVPSGGLYLYIS 128
   |||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

QY 61 QVLFKGGCSTHVLHTHTISRIASVYQTKVNLISAISPCQRETPGCAEAKPMXEPIYL 120
   |||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
DB 129 QVLFKGGCSTHVLHTHTINFSASVYQTKVNLISAISPCQRETPGCAEAKPMXEPIYL 188
   |||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

QY 121 GGVFQLEKGDRLSAEINRPDYLDFAESGQ 149
   |||||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
DB 189 GGVFQLEKGDRLSAEINRPDYLDFAESGQ 217

RESULT 11
Q28320 ID Q28320 PRELIMINARY; PRT; 234 AA.
AC Q28320;
DT 01-NOV-1996 (TREMBlrel. 01, Created)
DT 01-NOV-1996 (TREMBlrel. 01, Last sequence update)
DT 01-OCT-2001 (TREMBlrel. 18, Last annotation update)
DE TNF-ALPHA.
OS Capra hircus (Goat).
OC Eukaryota; Metazoa; Chordata; Craniala; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC Bovidae; Caprinae; Capra.
OX NCBI_TaxID=9925;
RN [1]
RP SEQUENCE FROM N.A.
RA Takakura H., Mori Y., Tatsumi M.;
RT "Molecular cloning of caprine TNF-alpha cDNA and its expression in
   E.coli and insect cells.";
RL Submitted (JUL-1996) to the EMBL/GenBank/DBJ databases.
DR EMBL: D86587; BAA13130.1; -.
DR HSSP: P01375; 4TSV.
DR InterPro: IPR003636; TNF_abc.
DR InterPro: IPR000478; TNF_family.
DR Pfam: PF00229; TNF_1.
DR PRINTS: PR01234; TNECROSISFCT.
DR ProDom: PD002012; TNF_abc; 1.
DR SMART: SM00207; TNF_1.
DR PROSITE: PS00251; TNF_1; 1.

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DR PROSITE: PS50049; TNF_2; 1.
SQ SEQUENCE 234 AA; 25519 MW; 9768E33BBAB041 CRC64;

Query Match 82.3%; Score 662; DB 6; Length 234;
Best Local Similarity 81.5%; Pred. No. 3,2e-65;
Matches 128; Conservative 14; Mismatches 15; Indels 0; Gaps 0;

QY 1 VRSSRTSPDKPAHVANPAQAEQQLQWLNRRANALLANGVELRDNLQVLPSEGLYLYS 60
DB 78 LRSSSQASSNKRPVAVHANVANSAPGQLRMGDSYANLAKANGVELKDNQVLPDGLYLYS 137
QY 61 QVLFKGGCPSSTVLLTHTISRAVSQTKVNLISAIRKPCQRETPEGAEAKPWKEPIYL 120
DB 138 QVLFKGGCPSSTVLLTHTISRAVSQTKVNLISAIRKPCQRETPEGAEAKPWKEPIYL 197
QY 121 GGVFQLEKGRDLSAEINRPDYLDFAESGQVYFGIIAL 157
DB 198 GGVFQLEKGRDLSAEINRPDYLDFAESGQVYFGIIAL 234

RESULT 12

Q9TGT7 PRELIMINARY: PRT: 138 AA.
AC Q9TGT7:
DT 01-MAY-2000 (TREMBLrel. 13, Created)
DT 01-MAY-2000 (TREMBLrel. 13, Last sequence update)
DT 01-OCT-2001 (TREMBLrel. 18, Last annotation update)
DE TUMOR NECROSIS FACTOR ALPHA (FRAGMENT).
GN TNF-ALPHA.
OS Aotus lemurinus (Northern gray-necked night monkey).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Platyrrhini; Cebidae; Aotinae; Aotus.
OX NCBI_TaxID=43147;
RN [1]
RP SEQUENCE FROM N.A.
RA Murillo L.A., Hernandez E., Echeverry S.J., Mendez J.A.,
RA Patarroyo M.E.;
RT "Aotus lemurinus gene for TNF alpha."
RL Submitted (OCT-1998) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF097329; AAF21304.1; -
DR HSSP; P01375; 4TSV.
DR InterPro: IPR003636; TNF_abc.
DR Pfam: PF00229; TNF_family.
DR PRINTS; PR01234; TNECROSISFCT.
DR PRODOM; PD002012; TNF_abc; 1.
DR SMART; SM00207; TNF_1.
DR PROSITE; PS00251; TNF_1; 1.
DR PROSITE; PS50049; TNF_2; 1.
FT NON_TER 1
SQ SEQUENCE 138 AA; 15269 MW; 29275EB4F4CD5068 CRC64;

Query Match 82.2%; Score 661; DB 6; Length 138;
Best Local Similarity 92.0%; Pred. No. 2e-65;
Matches 126; Conservative 4; Mismatches 7; Indels 0; Gaps 0;

QY 8 PSRKPVAHVANPAQAEQQLQWLNRRANALLANGVELRDNLQVLPSEGLYLYS 67
DB 1 PSRKPVAHVANPAQAEQQLQWLNRRANALLANGVELRDNLQVLPSEGLYLYS 60
QY 68 GCPSTHVLHTISRAVSQTKVNLISAIRKPCQRETPEGAEAKPWKEPIYL 127
DB 61 GCPSTHVLHTISRAVSQTKVNLISAIRKPCQRETPEGAEAKPWKEPIYL 120
QY 128 KGDRLSAEINRPDYLD 144
DB 121 KGDRLSAEINRPDYLD 137

RESULT 13
Q9MYZ22

ID Q9MYZ22 PRELIMINARY: PRT: 191 AA.

AC Q9MYZ22:
DT 01-OCT-2000 (TREMBLrel. 15, Created)
DT 01-OCT-2000 (TREMBLrel. 15, Last sequence update)
DT 01-DEC-2001 (TREMBLrel. 19, Last annotation update)
DE TUMOR NECROSIS FACTOR ALPHA (FRAGMENT).
OS Capra hircus (Goat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC Bovidae; Caprinae; Capra.
OX NCBI_TaxID=9925;
RN [1]
RP SEQUENCE FROM N.A.
RA TISSUE-OVARIAN FOLLICLE;
RA Wang B., Zhang Y.;
RT "Goat ovarian TNF alpha cDNA sequence."
RL Submitted (JUN-2000) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF276985; AAF87741.1; -
DR HSSP; P01375; 4TSV.
DR InterPro: IPR003636; TNF_abc.
DR Pfam: PF00229; TNF_1.
DR PRINTS; PR01234; TNECROSISFCT.
DR PRODOM; PD002012; TNF_abc; 1.
DR SMART; SM00207; TNF_1.
DR PROSITE; PS00251; TNF_1; 1.
DR PROSITE; PS50049; TNF_2; 1.
FT NON_TER 1
SQ SEQUENCE 191 AA; 20889 MW; 4F887EAF4320CC96 CRC64;

Query Match 82.0%; Score 659; DB 6; Length 191;
Best Local Similarity 81.5%; Pred. No. 5,2e-65;
Matches 128; Conservative 13; Mismatches 16; Indels 0; Gaps 0;

QY 1 VRSSRTSPDKPAHVANPAQAEQQLQWLNRRANALLANGVELRDNLQVLPSEGLYLYS 60
DB 35 LRSSSQASSNKRPVAVHANVANSAPGQLRMGDSYANLAKANGVELKDNQVLPDGLYLYS 94
QY 61 QVLFKGGCPSSTVLLTHTISRAVSQTKVNLISAIRKPCQRETPEGAEAKPWKEPIYL 120
DB 95 QVLFKGGCPSSTVLLTHTISRAVSQTKVNLISAIRKPCQRETPEGAEAKPWKEPIYL 154
QY 121 GGVFQLEKGRDLSAEINRPDYLDFAESGQVYFGIIAL 157
DB 155 GGVFQLEKGRDLSAEINRPDYLDFAESGQVYFGIIAL 191

RESULT 14

AC Q35853 PRELIMINARY: PRT: 232 AA.
AC Q35853:
DT 01-JAN-1998 (TREMBLrel. 05, Created)
DT 01-JAN-1998 (TREMBLrel. 05, Last sequence update)
DT 01-OCT-2001 (TREMBLrel. 18, Last annotation update)
DE TUMOR NECROSIS FACTOR ALPHA.
GN TNFA.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RA STRAIN-A/J;
RX MEDLINE=97246744; PubMed=9089109;
RA Iragi F., Teale A.;
RT "Cloning and sequencing of the tnfa genes of three inbred mouse strains."
RL Immunogenetics 45:459-461(1997).
DR EMBL; U68414; AAB65593.1; -
DR HSSP; P06804; 2TNF.
DR InterPro: IPR003636; TNF_abc.
DR InterPro: IPR000478; TNF_family.

DR Pfam: PF00229; TNF; 1.
DR PRINTS: PR01234; TNECROSISFCT.
DR PRODOM: PD002012; TNF_abc; 1.
DR SMART: SM00207; TNF; 1.
DR PROSITE: PS00251; TNF_1; 1.
DR PROSITE: PS50049; TNF_2; 1.
SQ SEQUENCE 232 AA; 25513 MW; 2ED6DA8EDDCADD8 CRC64;

|||||
DB 188 GGVFQLEKGDRLSANINLPKYLDFASQSQ 216

Search completed: August 30, 2002, 17:37:32
Job time: 149 sec

Query Match 81.0%; Score 651.5; DB 11; Length 232;
Best Local Similarity 78.7%; Pred. No. 4.6e-64;
Matches 122; Conservative 19; Mismatches 13; Indels 1; Gaps 1;

OY 3 SSSRTSPDKPVAHVANPQAEQOLQWLNRRANALLANGVELRDNLVPSSEGLYLYSQV 62
DB 79 SSSQSSDPKVAHVANPQAEQOLQWLNRRANALLANGVELRDNLVPSSEGLYLYSQV 138
OY 63 LFKGGGCPSTHVLTHRTISRIAVSYQTKVNLISAISPCQRETPGAEAKPMXEPYILG 122
DB 139 LFKGGGCPD-VYLLTHVTSRFAISYQEKVNLISAVKSPCKPTPEGAEAKPMXEPYILG 197
OY 123 VFQLEKGDRLSAEINRPDYLDFAESGQYFEGIAL 157
DB 198 VFQLEKGDQLSAEVNLPKYLDFAESGQYFEGIAL 232

RESULT 15

O9BEC4 PRELIMINARY; PRT; 216 AA.
AC O9BEC4;
DT 01-JUN-2001 (TREMBLrel. 17, Created)
DT 01-JUN-2001 (TREMBLrel. 17, Last sequence update)
DT 01-DEC-2001 (TREMBLrel. 19, Last annotation update)
DE TUMOR NECROSIS FACTOR (FRAGMENT).
GN TNFA.
OS Talpa europaea (European mole).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Insectivora; Talpidae; Talpa.
OX NCBI_TaxID=9373;
RN [1]
RP SEQUENCE FROM N.A.
RA van Dijk M.A.M., de Jong W.M.;
RT "Indels indicate that rodents are monophyletic and lagomorphs are
RT their sister group."
RL Submitted (FEB-2000) to the EMBL/GenBank/DBJ databases.
DR EMBL: AJ286831; CAC28539.1; -.
DR HSSP: P01375; 1A8M.
DR InterPro: IPR003636; TNF_abc.
DR InterPro: IPR000478; TNF_family.
DR Pfam: PF00229; TNF; 1.
DR PRINTS: PR01234; TNECROSISFCT.
DR PRODOM: PD002012; TNF_abc; 1.
DR SMART: SM00207; TNF; 1.
DR PROSITE: PS00251; TNF_1; 1.
DR PROSITE: PS50049; TNF_2; 1.
FT NON_TER 1
FT NON_TER 1
SQ SEQUENCE 216 AA; 23542 MW; FFEFE8DBBD27836 CRC64;

Query Match 80.7%; Score 649; DB 6; Length 216;
Best Local Similarity 84.6%; Pred. No. 7.9e-64;
Matches 126; Conservative 9; Mismatches 14; Indels 0; Gaps 0;

OY 1 VSSSRTPSDKPAHVANPQAEQOLQWLNRRANALLANGVELRDNLVPSSEGLYLYSQV 60
DB 68 LSSSRTPGDKPAHVANPQAEQOLQWLNRRANALLANGVELRDNLVPSSEGLYLYSQV 127
OY 61 QVLFKGQGPCSTHVLTHRTISRIAVSYQTKVNLISAISPCQRETPGAEAKPMXEPYIL 120
DB 128 QVLFKGQGPCSNVLLTHRTIORTAVSYEDAVDLISAISPCQRETPGAEAKPMXEPYIL 187
OY 121 GGVFQLEKGDRLSAEINRPDYLDFAESQ 149

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